DOCUMENT RESUME

ED 468 223 CE 083 671

AUTHOR	Grant, Peter
TITLE	Staying on Course: Factors Which Impact on Students' Completing Their Courses.
INSTITUTION	National Centre for Vocational Education Research, Leabrook (Australia).
SPONS AGENCY	Australian National Training Authority, Brisbane.
ISBN	ISBN-1-74096-015-7
PUB DATE	2002-00-00
NOTE	117p.
AVAILABLE FROM	National Centre for Vocational Education Research, 252 Kensington Road, Leabrook, South Australia 5068, Australia (Web edition: ISBN-1-74096-015-7; print edition: ISBN-1-740960149; Catalog no. 810, $33 Australian). Tel: 08 8333 8400; Fax: 08 8331 9211; e-mail: vet_req@ncver.edu.au; Web site: http://www.ncver.edu.au. For full text: http://www.ncver.edu.au/research/ proj/nr7025.pdf.
PUB TYPE	Reports - Research (143)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS
DESCRIPTORS	*Academic Persistence; Course Organization; Course Selection (Students); Dropout Prevention; Dropout Research; Educational Research; *Elective Courses; Foreign Countries; Learning Modules; Postsecondary Education; *Program Length; School Holding Power; *Student Attrition; *Technical Education; *Vocational Education; Withdrawal (Education)
IDENTIFIERS	*Australia; Australia (New South Wales); Australia (Victoria); Australia (Western Australia); *TAFE (Australia)

ABSTRACT

A study explored possible reasons why technical and further education (TAFE) students enrolling in vocational education and training (VET) courses in New South Wales, Victoria, and Western Australia do not complete those courses. Findings were based on these two kinds of evidence: evidence obtained from a statistical investigation of the outcomes of course enrollments and that obtained from phone interviews with past students. The study focused on the relationship between course completion rates and course structure. Findings indicated that these two broad groups of factors influenced the rate of course completions: courses that are "bigger" have lower completion rates and courses that have more choice have lower completion rates. With respect to course size, the completion rate was lower in these instances: the more modules in a course, the more "core" modules in a course, the more "elective" modules in a course, or the longer the course in nominal hours. The completion rate was higher the greater the average module length. With respect to course choice, courses composed of core plus electives had lower completion rates that "core-only" courses; core-elective courses with more electives from which to choose had lower completion rates than those with fewer; and where students had to choose several electives (M) out of a larger number (N), the lower the value of M/N, the lower the completion rate. The interview schedule is appended. (Contains 67 endnotes, 38 tables, and 23 figures.) (YLB)

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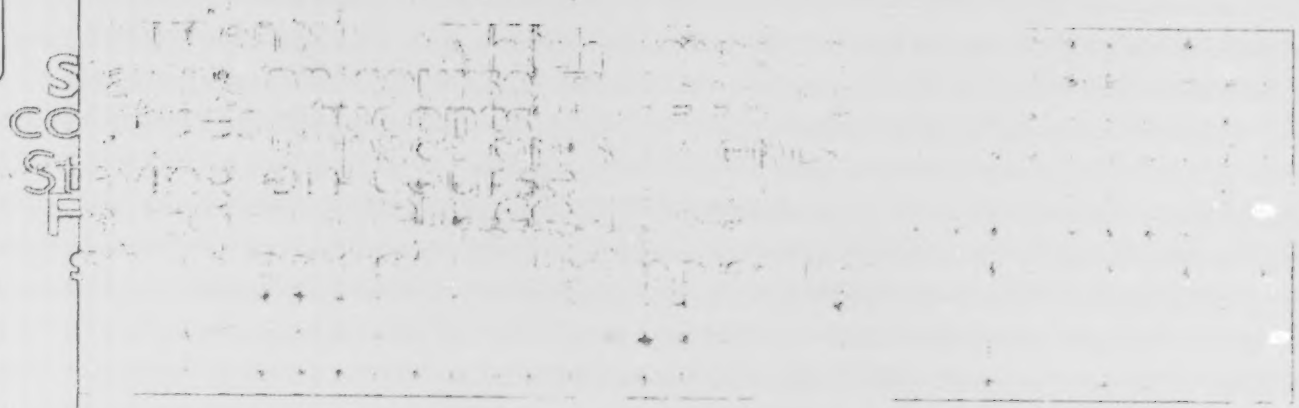

Staying on course

Factors which impact on students' completing their courses

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ISBN 1 74096 014 9 print edition
ISBN 1 74096 015 7 web edition
TD/TNC 69.19

Published by NCVER
ABN 87 007 967 311
252 Kensington Road, Leabrook SA 5068
PO Box 115, Kensington Park SA 5068, Australia
www.ncver.edu.au

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Executive summary

This report presents the findings of an exploration of possible reasons why students enrolling in VET courses do not complete those courses. The findings are based upon evidence of two kinds:

- evidence obtained from a statistical investigation of the outcomes of course enrolments
- evidence obtained from phone interviews with past students

The study adds to our understanding of completion patterns in vocational education and training, and takes us beyond the observation common amongst TAFE teachers that students tend to leave when things get tough on 'the first cold night in winter'.

There have been relatively few studies of course completion rates in TAFE. The most detailed study is *Student flows through Australian TAFE courses* by Foyster, Hon and Shah (NCVER 2000). That report develops and applies a methodology for analysing the flow of students through TAFE courses based on national VET data collected for the period 1994 to 1996. While it is important to note that not all those who enrol in a course intend to complete it or may recommence their studies later, it was found that most students leave with a positive outcome. The study found very little difference in outcomes based on gender. However, success rates vary substantially by both stream and field of study. Age is also a factor but the pattern is complex. Partial completion of courses is significant and illustrates the flexibility of the TAFE system to accommodate the needs of those who wish to acquire skills and competencies rather than qualifications. Concentration on qualifications alone may therefore seriously underestimate the skill base of the Australian workforce.

The present report focusses on the relationship between course completion rates and course structure, a factor which could not be considered in the earlier study. The scope of this report is more restricted than the national study by Foyster et al., since it covers only TAFE in the States of New South Wales, Victoria and Western Australia; however, the results support the earlier analysis in concluding that course completion rates are mostly from 18% to 34%, but with a much wider overall range. Course structure emerges as one in a suite of factors which appear to influence course completion rates.

The importance of the 'course completion' concept and its context

When a course is completed in the VET sector, this usually[1] means that the student is eligible for a qualification. The qualification may be essential for employment in particular occupations. In some areas where licensing is also required, a qualification may not be sufficient to entitle the graduate to formal employment as a licensed tradesperson. In other occupations, qualifications may be desirable rather than essential.

The course is generally developed with a qualification, and a particular subsequent form of employment in mind. If those enrolling in the course either do not intend to complete,

or enrol with the intention of completing but subsequently decide not to complete, arguably there is a lack of fit between the design of the course and the intentions of those enrolling in it.

This study is therefore important because it attempts to establish:

- whether there is a lack of fit
- whether any lack of fit is associated with particular aspects of course design
- whether any lack of fit is associated with characteristics of the target client group for a course

In practice, the framework for study within the VET sector is often not that of the course, despite the above-described structure. Increasingly during the 1990s the goal of VET has been the development in the student of occupationally-related competencies. This goal is facilitated by the use of a modular structure, with a 'course' consisting of a collection of modules.

Consequently the measure of outcomes widely used in the VET sector has not been *course* completions, but rather *module* completions, leading to two competing frames of reference for consideration of success within the VET sector: that of competencies modules or full qualifications. Therefore do (or should) students enrol in modules or courses?

While this study is focussed upon courses and course completions, the study recognises the parallel model with its emphasis upon competencies attained from modules and module completions as the dominant mode for understanding completions/attainment in VET.

One area of obvious overlap between these models occurs where a course consists of a single module. In this case a course completion and a module completion are the same thing. Such a course will almost certainly be quite short, while multiple-module courses can be quite long, running to thousands of hours. Of necessity, this study therefore considers courses of varying lengths, and takes course length (according to some measure to be defined) as a relevant variable.

Subject completions

Although the proportion of TAFE students who obtain a recognised qualification is relatively small (16.6% of the students in 1999), this does not mean that the remaining students 'fail', either academically or in terms of their intentions and expectations. In 1999, for example, almost three-quarters (74.1%) of subject enrolments resulted in a pass (including RPL), and over half the students (53.8%) passed all the subjects they undertook in that year. A further 30.6% of the 1999 TAFE students passed some but not all of the subjects they undertook in that year. Only three in 20 students (15.6% in 1999) have no achievements in the given year, and some of this group continue and pass subjects in future years.

Achievements of 1999 TAFE students

Student achievement in 1999	% of all 1999 TAFE students	Number of students ('000)
Obtained a qualification recognised under the AQF	12.1	149.16
Obtained a recognised, non-AQF qualification	4.5	56.01
Did not obtain a recognised qualification in 1999	83.4	1029.52
Passed all subjects undertaken in 1999	53.8	630.64
Passed some but not all subjects undertaken in 1999	30.6	358.88
Did not pass any subjects undertaken in 1999	15.6	183.32
All 1999 TAFE students (excluding credit transfer only)	**100.0**	**1234.70**

Source: NCVER (unpublished figures)

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Main findings on course completions

The sample of courses included in the statistical investigation included a wide range of outcomes, as shown in the table below.

	NSW	Victoria	Western Australia
Number of courses	112 (in 1995/96)	Over 360 (in 1995/96)	134 (in 1996/97)
Number of students	85 921	364 000	86 324
Average course completion rate	About 35%	About 16%	About 16%
Minimum course completion rate	0%	0%	0.6%
Maximum course completion rate	100%	49.8%	82.7%

Note: Since course structures are not necessarily the same across the States, and the periods available for students to complete courses vary, comparisons of completion rates between the States cannot properly be made. However, it should be noted that for each State the course completion rates varied over a wide range.

Nevertheless two broad groups of factors appear to influence the rate of course completions.

- courses that are 'bigger' have lower completion rates
- courses that have more choice have lower completion rates

These broad factors may be teased out as follows.

With respect to course 'size':

a. The more modules there are in a course, the lower the completion rate (in all three States, possibly weaker in Victoria).

b. The more 'core' modules there are in a course, the lower the completion rate (in all three States, but a rather weaker effect).

c. The more 'elective' modules there are in a course, the lower the completion rate (in all three States, but strong in only one).

d. The longer the course, in nominal hours, the lower the completion rate (while this is generally true though weaker than (a–c) above, in both NSW and WA the distribution is bimodal, with the courses whose nominal length is 601–700 hours having the lowest completion rate).

e. The greater the average module length, the higher the completion rate (all three States, and which follows from (a) above, since fewer modules implies longer modules).

With respect to course 'choice':

a. Courses composed of core plus electives had lower completion rates than 'core-only' courses (all three States).

b. Core-elective courses with more electives from which to choose had lower completion rates than those with fewer electives from which to choose (all three States, but somewhat weaker than (a)).

c. Where students had to choose several electives (M) out of a larger number (N), the lower the value of M/N, the lower the completion rate (although only formally investigated for Victoria, probably also true in the two other States), i.e. as for (a) and (b) the greater the choice, the lower the completion rate

Finally, one other factor was found to have impact in NSW (it was not investigated in the two other States): courses which could be categorised as consisting of modules with ungraded assessments had higher completion rates than courses consisting largely of modules with graded assessments.

Because these factors were (within the limits indicated above) found in each State in which they were investigated it seems more likely than not that they can be applied generally across VET courses in Australia.

Other possible factors which were investigated, and which showed no clear relationship to course completion rate, were:

- AQF/RATE classification, i.e. level of course
- stream of study (although there is variability from stream to stream), i.e. level of course
- module load completion rate in one State (a measure of efficiency at the module level)

To complete the study, the names of 60 courses with the highest completion rates and the names of a further 60 courses with the lowest completion rates were scanned to see if there were any patterns that might be investigated at a later date.

In broad and very general terms, it appears that higher completion rates are associated with:

- enrolment in courses where enrolment is combined with paid employment
- enrolment in courses which are regarded as a normal requirement for entry into an occupation
- trade certificates and apprenticeships
- courses leading to occupations in personal and community services

The last two issues relate strongly to the first two in terms of occupational entry, i.e. regulated trades and such occupations as enrolled nurses.

Similarly, lower completion rates appear to be associated with:

- enrolment in courses not regarded as a requirement for entry into industry
- enrolment in courses with large banks of modules

About this study

Where the information came from

Data were obtained with the co-operation of relevant authorities in three States: New South Wales, Victoria and Western Australia. There were two components of the study. The statistical investigation, dealing with course outcomes, sought to identify course structural factors that had impact on course completion. The phone interviews sought to identify personal factors that, in the opinion of the students interviewed, affected course completion.

Analysis of the data obtained was primarily based upon simple counts of events (completions in the case of the statistical investigation, 'votes' from past students in the case of the phone interviews). The statistical investigation also relied upon statistical comparisons of completion rates for various categories of course structure, identified during the study. The results are presented in as direct a way as possible.

The variables considered in this study

In the statistical investigation of course completions, the following course variables were used:

- course level (as measured by AQF/RATE)
- course stream
- course length (as measured in number of modules)
- course length (as measured in nominal course hours)
- average module duration (as measured in nominal module hours—derived from two previous variables)

- core/elective (whether or not students had any choice of modules to be studied)
- elective range (in courses which allowed elective choice, the total number of electives from amongst which students could choose)
- elective proportion (in courses which allowed elective choice, the proportion of the available elective modules which the student must choose—as measured in module hours)
- core size (as measured by the number of core modules)
- grading (whether courses were graded or ungraded)

Not all variables were used in each of the three States.

For the investigation of personal (student) factors that might influence course completion, the following variables were used (in all three States):

- original intention to complete
- perceived importance of qualification
- main reason for enrolment
- achievement of enrolment intention
- average weekly hours of participation
- delivery mode
- in the event of non-completion, relative importance of 58 possibly-influential factors
- employment status at time of enrolment

In addition, some overall information about course completion was sought as part of the background to the study.

There are also differences in the ways in which States collect and record data, and the ways in which the samples for this study were drawn, making comparisons between the States inappropriate. Thus the NSW sample was drawn on the basis of courses in which students were enrolled using centrally maintained records of course completions. In WA, while the sample was drawn from course enrolments, the record-keeping system is directed towards module completions, and the recording of course completions requires a student initiative. In Victoria course enrolments are inferred from module enrolments, and course completion data will reflect this.

Because of these variations in practice, the emphasis in this study is upon the identification of factors within a given State. Where a factor is found to be important across more than one State then, given the variations in recording systems, it can be assumed that such a factor is quite robust, and a characteristic of the VET sector as a whole rather than of practices in any one State.

Despite these difficulties, the intention of the study was to use a methodology across the three States that was as uniform as possible. For each dataset all variables that could be calculated were included in the study. What follows summarises the main course factors influencing course completion.

Methodology and main findings on personal factors related to course completions

The following table shows the number of students involved in this exercise in the three States.

Student group/ number approached	New South Wales (students from 1995 and 1996)		Victoria (students from 1995)		Western Australia (students from 1996)	
Available for interview	301	24%	247	18%	215	37%
Available but refused interview	165	13%	96	14%	28	5%
Contact made but availability could not be assessed because of absence from home	103	8%	57	4%	34	6%
Moved/unavailable	698	55%	894	64%	297	52%
Total students approached	**1267**		**1394**		**574**	

Reasons for enrolling

The three reasons for enrolling in a course for the present sample were compared with the responses from the set of all graduates reported in the *TAFE graduate destination survey 1997*, and the results appear in the following table.

Main reason for doing course	Non-completers (this study)	TAFE graduates (1997)
Getting a job	26%	29%
Getting further skills for my job	23%	13%
Interest/ personal development	16%	14%

The great difference between the two groups is the much higher proportion of 'non-completers' who gave 'getting further skills for an existing job' as the main reason for enrolling.

Of all telephone interviewees asked whether they intended to complete the course, 88.1% said they had. The link between this question and the earlier one (for non-completers only) was investigated, and showed responses in the table below.

Reason for enrolling	Intended to complete		Did not intend to complete	
Getting a job	182	(42%)	19	(30%)
Getting further skills for my job	149	(34%)	27	(42%)
Interest/ personal development	107	(24%)	18	(28%)
Total for these 3 reasons	**438**	**(100%)**	**64**	**(100%)**

This table supports the view that *getting a job* was less important for those who did not intend to complete the course (and vice versa, for those intended to complete, getting a job was a far more important reason for enrolling). Other reasons given for enrolling did not show as much variation as that in the table.

The above should not be assumed to indicate that students did not value the qualification associated with undertaking the course, and in fact 62% rated getting a qualification as 'very important'.

A final question in this section asked whether the student had 'achieved the reason for doing the course'. The following table compares those in the study who said that they had completed the course with those who said they had not.

In other words, those who did complete the course were much more likely to feel that they had achieved their goals when enrolling in the course.

Achieved the reason for doing the course?	Claimed to have completed (%)	Claimed to have not completed (%)
Yes	84	54
No	6	28
Other answers	10	18
Total	100	100

Course completion

One problem for a study of this kind exists when there is uncertainty about whether or not a course has been completed. Two questions asked in this section of the interview indicate the magnitude of the problem.

As indicated above, in Victoria and Western Australia it had not been possible to establish in advance whether or not students approached for interview had completed the course. In each case, around 65% of students interviewed said that they had completed the course. However in New South Wales, where according to the central information system only students who had not completed the course requirements were included in the sample, some 29% claimed to have completed the course!

Even more alarmingly, in response to a second question that asked students to say how many subjects they had completed, 21 students who had claimed to have completed the qualification also said that they had passed no subjects. There were other similar anomalies when these two questions were compared, suggesting that such questions need to be worded very carefully indeed if any use is to be made of answers.

As a result of these confusions, no significant use can be made of these responses in this study.

Importance for non-completion of various factors

The 374 students who said that they had not completed the course were then asked to rate the importance of various possible reasons for not completing the course. The ten 'most important' factors included some known from previous research: time demands too great, changed employment, changed career goals, difficulty balancing study with family commitments, having achieved the intended goals before completing, and course being inappropriate. The other four of the 'top ten' all seemed to relate to administrative procedures within course offerings: having to complete subjects perceived as irrelevant, not being able to get credit for prior learning, subjects inconveniently being required to be taken in a particular sequence, clashes in the timing of assessments.

In addition, for those for whom employment changed, relevance and time for study were very strongly identified as important factors.

A factor analysis was then carried out, from which the four strongest factors were summarised as: Quality of course delivery, Time demands/personal management skills, Course too long/inflexible/irrelevant, and Course no longer appropriate to changing needs.

Employment situation

The final section of the interview directly addressed the possibility that a change in employment could affect course completion.

About 28% of students indicated that they had changed employment while studying, and of those who did change jobs, almost a third said their course was not relevant to their new job. More telling, however, is the apparent impact of changing jobs: of those who changed jobs, about 42% claimed to have completed the course, while of those who did not change jobs, about 55% claimed to have completed the course. This strong association indicates that changing jobs is a significant risk factor for course completion.

About this study

The differences in availability for interview are explained at least in part by the varying amount of time since the students first enrolled in their courses.

Personal factors related to completion or non-completion were investigated by telephone interview. The same telephone interview was used in all three States, and the results are reported below in sections equivalent to the four sections of the interview schedule.

The interviews were quite long (in terms of the length of the documents—for example the third section asked for ratings on 58 possible factors influencing non-completion), but on average only lasted 13 minutes.

A problem was that in Victoria and Western Australia it was not possible to identify in advance which students had not completed their courses (in New South Wales all interviewees were known to have not completed their courses) so that the selected sample included both completers and non-completers. There is a question in section C that asks the student to say whether or not she/he has completed the course, and the answer was accepted as truthful and used to eliminate 'completers'.

In summary

This study makes no judgements about the value of a course completion. The data have limitations, and there is a lack of clarity in some areas, but six points appear to stand out:

- Short courses have higher completion rates and long courses have lower completion rates.
- Courses with more choice (i.e. more electives) have lower completion rates
- Those whose main reason for enrolling is to acquire skills are less likely to complete a course compared to those who enrol to get a job.
- Overall, those who had not completed the course were far less likely to have achieved their reason for enrolling in the first place.
- Organisational difficulties were often cited by students as important reasons for non-completion.
- Those who change jobs are less likely to complete the course in which they enrolled.

This study has presented preliminary evidence on the factors associated with non-completion of TAFE courses. Further studies should consider the identified factors in more detail. The present training environment, with its emphasis on module completion and skills acquisition (rather than qualifications), may also contribute directly or indirectly to a pattern of course completions that has been identified as existing in three States but which probably exists throughout Australia.

1 Context

This chapter provides an overview of the limited published research into the relationships which exist between course completion and course structure. The chapter begins by examining some of the issues involved in defining and measuring course completion and reviews available research on factors associated with course completion. Following that, notions of course structure and the problems involved in 'measuring' course structure are discussed. Finally the chapter reviews the limited research which exists on the relationship between course completion and course structure. Throughout the chapter the questions which guided the research are introduced, along with some of the thinking that guided the methodology of the project.

Research in the area of course structure and its impact upon course completion is almost non-existent in the literature. Moy (1999)[2] in a recent review of the literature on course outcomes, course structure and course delivery has commented upon this situation, highlighting the absence of empirical research in this area.

The context for the project

During the 1990s, and particularly in the last few years, discussions have been occurring at national and State levels about appropriate ways of measuring the outputs of the VET system. The various State systems are adopting their own approaches to ensuring quality, in the context of the development of national quality and performance measurement processes. The Australian National Training Authority (ANTA) has through its Performance Review Committee developed a range of key performance indicators (KPIs) for measuring the outputs and outcomes of the VET system.

The first of the Key Performance Measures, KPM1, 'Skills outputs produced annually within the domain of formally recognised vocational education and training' is of greatest relevance to this project in that it concerns the measurement of outputs at both the module/unit of competency level and the course/qualification level. The data to be used to capture national skill outputs is to include units of competency, modules and qualifications, as well as a single standardised output measure—which is in the process of development.

Underpinning these KPIs is a set of principles one of which states that:

> *Amongst other things, performance measures should be clearly defined and measurable, and have regard to the ability of the system to efficiently collect data that enables reliable comparison and reporting against an appropriate timeframe.*
>
> ANTA (1999)[3]

The Moy (1999) report recognised that qualifications data, though collected under AVETMISS, needed improvement before the data could be consistently reported under KPM1.

What is a course?

The different players in the VET system use the word 'course' to mean different things. In many situations, the term 'course' refers to formally-accredited programs —including both short courses (leading to statements of attainment), and major award programs—which are accredited and nationally recognised by the various State training agencies. But students may enrol in a training program or module which is not formally-accredited but is also referred to by them, and often by the provider offering the program, as a 'course'. Within the context of training packages, it is likely that a range of new perceptions about the meaning of the word 'course' will develop.

In this project the formal meaning of the word 'course', as expressed in national policy statements is used:

> *A structured sequence of vocational education and training that leads to the acquisition of identified competencies and, which if submitted for accreditation, would lead to a qualification.*[4]

Course completion

'Course completion' is another expression whose meaning varies from context to context. Discussions about course completion almost invariably become intertwined with concerns about 'successful outcomes' and 'course outcomes'. Many writers have referred to the problem that the different users of the system—students, teachers, institutes, employers and funding bodies—have different perceptions of what these notions mean and the different perceptions can sometimes be seen as being at odds with one another. ANTA's *1995 Annual Report* addressed one aspect of the issue:

> *What constitutes 'success' will vary from student to student, contingent on his/her particular needs and aspirations and the aims and objectives of the program of study.*
>
> ANTA (1996)[5]

Cleary & Nicholls (1998) provide a number of examples: the employer who sends employees to undertake a specific module to gain required job skills and consequently has no interest in the employees undertaking the final assessment that leads to a formal 'success', the student who leaves a full-time course in order to take up a job offer utilising skills already gained in the course. In each of these cases a funding body with a focus on the complete module or course may see this as a non-completion of a 'unit' of training and an incomplete return on the funds provided for that training[6].

The Office of Training and Further Education in Victoria[7] reports the situation where trainees are judged in their workplaces to be competent prior to completing a course of study. Here course completion may not be an appropriate measure of success; rather it may be that promotion and salaries equivalent to those of other employees should be used as measures of successful outcome of the course:

> *We were made aware of one industry traineeship where a number of the trainees discontinue before the end of the requisite training period. This was because they had achieved promotion and salaries similar to other employees. They had been adjudged 'competent' by their employers. As a consequence, the continuation of the traineeship arrangement seemed unnecessary.*

Further, this example raises the question of the nature of recognition of competence and its relationship to certification. The paper goes on to suggest that a more flexible arrangement may have ended the traineeship at the point of achievement of the competencies or made provision for moving on to higher level training if required.

Moy (1999) has suggested that students should be said to have satisfactorily completed if they get what they came for. Therefore outcomes should be analysed against student intentions on enrolment although significant problems are raised by these suggestions.

Definition of course completion

This research focusses on course completion rates—as distinct from more general course outcomes—and uses as its definition of course completion:

> *Course completion occurs at that stage when a student completes the requirements for the award of a nationally-recognised qualification.*

It is recognised that there are many shortcomings with this definition. In practice, course completion is likely to be made more complex by factors such as:

- students being awarded an approved exit qualification prior to completing the course in which they originally enrolled
- students completing the requirements of a course as the result of an approved recognition process
- students of unknown enrolment status who may or may not be continuing in a course
- students transferring out of one course into another, or into one course from another
- policy differences and local practices in various contexts

Underpinning the present definition of course completion is an assumption that for each course it is possible to identify when an individual student has completed the requirements for a qualification. In the case of accredited courses, this should be possible given the requirements for providers to document the course requirements in a format approved by the various State training agencies. In addition, the *Guidelines for Customisation* make it a requirement that all courses incorporate a set of course rules—which define the requirements for completion of the course[8].

Other approaches to course completion have been employed by a number of researchers for a range of methodological reasons. One example is that employed by Foyster et al. (1999)[9] who defined course completion as 'completing the number of distinct hours of study equivalent to the specified curriculum hours for a course'. This approach was used in a recent NCVER study to examine the 'flow' of students through TAFE courses at a national level. Students were considered to have completed a course if the sum of the specified hours for all modules they successfully completed was equal to, or greater than, the specified curriculum hours for the course in which they were enrolled. The authors raise a number of issues in using this practical definition of completion, one of which is that the actual hours that students may take to successfully complete a module can be different to, and is often less than, the specified hours for the module. If this is the case, then students may not be recognised as completing because they have not completed hours equivalent to the specified curriculum hours for the course.

One interesting aspect of the 'flow' project are the distinctions made between 'completion', 'partial completion' and 'failure'. Partial completers are defined as those students who successfully complete all modules in which they enrol but who do not complete all the requirements of the course. The authors suggest that partial completion is actually a more common outcome of the VET system than course completion.

Measuring course completion

Very few, if any, of the VET State systems in Australia systematically measure course completion. Certainly none have published measures of course completion. In part this

would appear to be because established accountability approaches and quality systems put an emphasis on other measures of the efficiency and effectiveness of the system. In particular, reporting and funding arrangements which focus on 'module' completions result in the view expressed by one system that 'we care a lot about module completions—but we don't care at all about course completions'.

However, without data on course completions it is very difficult to develop strategies for improving completion. As Cleary & Nicholls (1998) point out in the context of improving module completion, 'there is little an institute can do to keep a student whose family is moving interstate. But there may be a lot more it can do to retain a student who has poor study skills or who is in financial distress'[10].

At the national level, the closest measure of course completion at the whole course level is the 'qualification completed' file which is recorded in the national VET information system, AVETMISS[11].

> *This file contains a record for each acknowledgement by the training organisation that a client has completed the requirements for a qualification, either during the collection period or in a year prior to the collection period (where that qualification has not previously been reported), regardless of whether or not the client has physically received the acknowledgement . . . The reported entitlement to a qualification must relate to a client's course of enrolment or an approved exit qualification, or result from an approved recognition process.*
>
> (NAT00130, S2–12)

This measure provides a means of determining the total numbers of qualifications completed each year in Australia, figures which are published each year by NCVER. Table 1, for example, gives the numbers of qualifications which were completed in Australia in 1997 according to AVETMISS.

Table 1: Qualifications completed in Australia in 1997[12]

Qualifications completed in 1997	ACT %	NSW %	NT %	Qld %	SA %	Tas %	Vic %	WA %	Aust %
Diploma	1.3	0.1		0.3	1.0		0.3	3.8	0.6
Ass Dip	8.2	6.8	7.9	8.9	8.6	9.2	8.7	5.8	7.6
AdvCert/Ptrade					1.7	0.3	0.7	0.7	0.4
AdvCert/Other	1.9	7.4	1.8	2.7	3.0		9.5	6.2	6.5
Cert—Trade	12.0	9.9	14.0		14.2	26.9	12.9	11.8	10.3
Cert—Other	16.9	16.6	17.3	17.5	23.1	14.7	8.1	19.3	15.8
AQF Adv Dip	3.5	2.2		2.9	2.4	5.4	2.1	3.2	2.4
AQF Dip	13.9	4.1	6.8	21.2	3.4	1.8	11.8	8.4	8.1
AQF Cert IV	9.9	10.0	7.4	15.1	19.8	12.2	10.8	11.5	11.8
AQF Cert III	16.2	21.1	15.9	18.1	14.6	15.4	12.7	19.8	18.1
AQF Cert II	13.7	15.8	19.0	5.4	6.6	12.0	18.8	8.4	13.7
AQF Cert I	2.4	6.1	10.0	8.1	1.4	1.8	3.5	1.3	4.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
N =	1188	30 711	649	7576	5876	1180	13 305	6122	66 607

These figures by themselves provide no basis for estimating 'completion rates'. It is only when compared with course enrolment figures that we can start to get a picture of the rate at which students enrolling in courses are completing them.

Table 2 provides information about the numbers of students who were enrolled in at least one module in a VET course in 1997.

Table 2: Course enrolments in Australia in 1997[13]

1997 course enrolments	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Aust
% of total population	1.70	33.90	1.00	18.40	8.00	2.60	24.80	9.70	100
Total no. of clients	**18 700**	**508 500**	**16 200**	**218 200**	**141 500**	**26 600**	**417 400**	**111 500**	**1.5m**
% of total clients	1.30	34.90	1.10	15.00	9.70	1.80	28.60	7.60	100
Total enrolments	**20 800**	**605 900**	**17 200**	**329 500**	**154 600**	**36 600**	**544 100**	**135 500**	**1.8m**
% of Australian course enrolments	1.10	32.90	0.90	17.90	8.40	2.00	29.50	7.30	100

The difference between the numbers of course enrolments and the number of qualifications awarded in 1997 is considerable—with a total of 1.8 million course enrolments across Australia and 66 607 qualifications awarded.

However, there are many significant problems in drawing parallels between the ratio of these figures and course completion rates. Some of the most obvious reasons include the following:

- The two tables do not represent the same cohorts of students. Both tables provide information about 1997 enrolments and qualifications. Many of the qualifications awarded will be to students who first enrolled in a course earlier than 1997; likewise many of the students who first enrolled in 1997 will not complete the requirements for their qualification in 1997, and will instead appear as qualifications awarded in subsequent years, and many of the students enrolling in 1997 are continuing in studies commenced in previous years.
- Table 2 includes a significant number of enrolments in courses which are not accredited and recognised nationally—and consequently cannot result in the award of a nationally recognised qualification.

However, there are many less obvious reasons why such comparisons are of little value:

- In Victoria, enrolments are at the module level. Consequently, all of its 544 100 course enrolments are *only inferred* from module enrolments. Whether or not these students had any intention of completing a course when they enrolled in their module is not reflected in table 2.
- Table 1 provides information only about qualifications completed. The AVETMISS standard specifically states that this measure should apply 'regardless of whether or not the client has physically received the acknowledgement'. However only in a few States are students automatically awarded a qualification when they complete the requirements for the course. Instead students are required to apply for the award of the qualification. Consequently table 1 may under-represent the numbers of students who actually complete the requirements for a course.
- Students may be awarded qualifications for courses other than those in which they originally enrolled in the event that they leave prior to completing the course in which they first enrolled.

As mentioned earlier, one recent study is that of Foyster et al. (1999) who have used a Markov Chain model to study student progression through the TAFE system. Markov Chains provide a consistent and systematic method of accounting for movements of all members of a population at the beginning and end of a given time period. Using the definition of course completion discussed earlier, the final achievement of students who

commenced courses in 1994 was determined as at the end of 1996. Students who re-enrolled in 1996 but did not complete their course by the end of the year were classified as continuing. The results for various types of outcomes are presented in table 3.

Table 3: Results of course enrolment as at the end of 1996 for students who commenced in 1994 by type of course[14]

Course type	Course outcome as at the end of 1996				Total
	Completion	*Partial completion*	*Failure*	*Continuing*	
One-year	148 429 (31%)	202 313 (42%)	90 296 (19%)	40 368 (8%)	481 406 (100%)
Two-year	5 961 (4%)	63 208 (39%)	41 640 (26%)	52 064 (32%)	162 873 (100%)
Three-year	1 368 (4%)	13 517 (40%)	4 914 (15%)	14 029 (41%)	33 828 (100%)
All	**155 758 (23%)**	**279 038 (41%)**	**136 850 (20%)**	**106 461 (16%)**	**678 107 (100%)**

The authors conclude that:

> *For students, full course completion appears to be of less significance than module completion. However, in order to develop sound policy on this issue reasons for partial completion of courses need to be determined. It would also be of interest to determine if certain types of modules of a course are more common for partial completers to enrol in than other types. Surveys of such students may help to shed further light on this important subject.*[15]

Further they suggest that research on the labour market consequences of only partially completing a course would be another area for future investigation. It is possible, they argue, that a key reason students leave prior to completing their course may be that they are 'reacting to the demands of the market'.

State-based measures of course completion

At the State level, the project has encountered only one approach to measuring course completions—though the data is neither routinely produced nor published. In NSW, a four-year running average course completion estimate is derived from the average of the number of course completions over a four-year period divided by the number of commencements in the course over the same four-year period.

As an estimate and as a basis for informing policy, the figure obtained is reasonable if a bit rough, the correlation with 'actual' course completions being $r = 0.758$[16]. However, significant anomalies can occur in these estimates when enrolments are not consistent over the four-year period—such as when a course is being re-accredited or a new course implemented. In these cases, course enrolments may vary widely from one year to the next and course completion rates may vary significantly from 'actual' course completion rates. For example, in one course where commencements over the four years 1995–98 were 757, 678, 677 and 675 respectively and completions over the same period were 471, 435, 440 and 394, the four-year average completion rate was 120.2%.

Traineeship non-completion rates

One area in which there is published information about completion relates to apprenticeship and traineeship provision. The Department of Education, Training and Youth Affairs has published data suggesting that around 24% of apprentices and 45% of trainees fail to complete their training.[17]

Beswick et al. (1999)[18] compared rates of non-completion of trainees with rates of separation from employment in like occupations. Their findings suggest that around 38% of those people commencing a permanent or casual job can be expected to leave that job within a

year. Further they found that the rate of non-completion of traineeships is of the same order as the rate among the general population for separation from employment within a year of commencing a job.

Dr Larry Smith[19] in a study of trends relating to apprenticeship and traineeship provision in Queensland reported high cancellation rates and low rates of retention of apprentices and trainees. Traineeship completions in Queensland expressed as a percentage of commencements in recent years range from about 30% to about 53%.

University completion rates

In the university sector, again there is limited information about course completion rates. Beswick et al. (1999) suggest, without any reference to their source, that the drop-out rate between first and second year at university is about 25%.[20] Richards (1999) reported the results of a survey carried out by the Department of Education, Training and Youth Affairs of 126 225 Australian students who enrolled in university courses in 1992. The survey results suggest that of those students who commenced in 1992, 33.9% had dropped out and 60.3% had completed their courses. In particular, the report found that those students who gained a place on the basis of mature age and employment experience had the highest drop-out rates. The report though does not show if those students who left courses completed another degree after leaving their course. Other government studies, the report says, suggest that up to 15% of students change institutions.[21]

Measurement of course completion rate

In the absence of any standard methods for calculating course completion rates, the approach used to calculate course completion in this study is based upon the following formula:

$$\text{Course completion rate} = \frac{\text{No. of students who have completed requirements for the qualification}}{\text{No. of students who enrolled in the course in any one year}}$$

where course completion rate refers to the proportion of students who first enrol in a specific course in any one year and who ultimately go on to complete all the requirements for the qualification in which they are enrolled. Given the complexities of real situations and the range of complicating factors discussed earlier, this formula provides, at best, an approximation of course completion rates—and may have very little applicability beyond this project.

What is a 'good completion rate'?

One of the areas to be examined by the project is course structure differences which exist between courses with high completion rates and courses with low completion rates. This raises the question of how we recognise a 'high' completion rate. Given the absence of information providing detailed course-by-course completion rates, it is hardly surprising that no information could be found about what might constitute a high or low completion rate.

In order to make the judgement of what is 'high' and what is 'low', one approach is to use the absolute value of the course completion rate and to make the simplistic judgement that a course with a completion rate of 80% is better than a course with a completion rate of 60%. However, there will be problems comparing courses directly in this way. Is it appropriate to compare the completion rate of a short course which is meeting the immediate short-term training needs of an employer or employee with that of a longer, full-award course which

may focus more on the long-term training needs of the individual, the community and industry? Can we compare one course where all students are employed as a requirement of their enrolment in the course and who need to successfully complete the course in order to continue their employment with another which is an access or pre-employment course where one of the key intentions of those enrolling may be to gain basic skills or employment? Success for many students enrolled in a pre-employment course may be gaining employment, rather than necessarily completing the course.

ANTA has recognised the distinctions between the purposes of different courses as an important hallmark of the Australian VET system and suggested that we should expect lower completions, at least in some areas, because of the nature of VET provision and its student group:

> *The hallmarks of Australia's TAFE system are that it provides second chance opportunities, that it caters for those who have educational disadvantage and that it allows students to attempt a challenge. These features of the system are its strengths, yet they will tend to result in completion rates which are lower than those which could otherwise be obtained.*[22]

In addition, a wide range of policy and operational factors may impact upon completion rates and may result in completion rates either appearing to be higher or lower:

- statewide or local enrolment systems and processes
- processes for determining in which course a student should or will be enrolled
- the methods for determining when an enrolment is a 'course enrolment'
- recognising when a student has completed a course
- the structure of the information systems and the quality of the data

Each of these factors is dealt with in more detail in later chapters.

The important point here is that we need to be aware of the risk of making the leap to thinking 'high = good' and 'low = poor'. Because a course has a lower completion rate than another does not mean that it is not fulfilling its purpose, nor meeting the intentions and needs of the students who are enrolling in it.

It is the awareness of this risk that readers may make this 'high = good' leap which presented a major problem for the Steering Committee for this project and each of the States providing data, that is, whether or not it is appropriate to publish tables which list the 'raw' completion rates for courses in the study. Such a table could be used for the purpose of making inappropriate comparisons of completion rates—across courses and across States.

Any measurement of rates needs to strive to compare like with like; short courses with other short courses, basic + prevoc with other basic + prevoc.

Factors which impact upon completion

A number of writers identify a wide range of factors associated with completion. Cleary and Nicholls,[23] for example, group factors they identify which may impact upon module completions into three categories: factors affecting students as individuals, environmental factors, and institutional practices affecting completions. They note that much of the information about these, particularly in relation to institutional practices, is based on anecdotal information rather than systematic research.

Using this study as a starting point, and drawing upon a range of others,[24] a wide range of factors can be identified which potentially may be associated with course completion. They have been organised in table 4 into six categories: environmental factors, personal factors, system level factors, institute/college level factors, course structure factors and course delivery factors.

Table 4: A partial list of factors hypothesised to influence course completion rates

Environmental
Demographic factors relating to the student's place of residence/study
Government policies—e.g. Austudy
Employment opportunities within the industry
Number of providers in particular areas
Changes in the labour market
Rural community factors

Personal
Student profile
Gender
Ethnicity/cultural background
Aboriginal & Torres Strait Islander
Age
Disability
Special needs (e.g. those with disabilities or possibly at risk)
Family support, pressure and expectations
Peer support, pressure and expectations
Prior education and skills including personal management and interpersonal skills
Level of schooling
Literacy/numeracy levels
Skills/competency levels, including independent learning skills
Previous education and qualifications
Inability to cope with demands of course/study
Study/learning skills problems
Inadequate academic background to undertake course
Level of independence
Commitment and motivation
Inability to handle flexible delivery
Work experience/employment status

Institute/college level
Institute course profiles may be associated with completion outcomes
Availability of transition programs
Enrolment practices
Amount and quality of pre-course information and advice
Explanation of scope and difficulty of the course/modules
Access to literacy and numeracy assistance
Availability and appropriate hours of services such as child care, library, cafeteria, etc.
The quality of the teaching/learning experience and variability in quality of teaching and course delivery between institutes and colleges within the same Institute
Variability in assessment practices between institutes
Student mix within a class
Quality of facilities
Location convenient to home and work
Access to transport
Access to appropriate workplaces for work experience/work placement components of course
Timetable does not suit/changed timetable

Course structure
Industry area
Course field of study
Stream of study/stream
Level of qualification
Entry requirements
Selection criteria and methods
Length of course (nominal hours)
Number and arrangement of modules in course
Work experience prior to enrolment
Employment status at time of enrolment
If employed, job role
Employment changes through period of study/training
Changes in employment status through period of study/training
Student's intention for enrolling in course
Appropriateness of course choice
Choice of course
Change of vocational intention by student
Wrong choice of course/module by student
Career interests and goals
Transfer to a more appropriate course
Transfer to another institution
Personal development/interest satisfied prior to course completion
Personal experiences/satisfaction with training once enrolled
Discontent with the course/training
Leaving a VET course to go on to alternative study, e.g. another VET course or university
Social interaction within course
Positive perceptions of course value
Unsatisfactory experience with teacher/other students
Anxiety about assessment

System level
System level quality approaches
Professional development opportunities available to teachers
Course design/accreditation policies
Module length (nominal hours)
Module area of learning
Number of core modules
Opportunity for exit with lower level qualification
Opportunity for entry with advanced standing
Access to bridging modules
Availability of workplace learning opportunities—work experience, work placement
Course design features: sequencing of modules
Access to RPL
Appropriateness of learning outcomes for qualification level
Assessment—appropriateness to depth and breadth of knowledge, validity, difficulty, timing
Quality and regularity of feedback after assessment events submitted
Client load

Table 4: A partial list of factors hypothesised to influence course completion rates (cont.)

Course delivery	Availability of supporting technologies
Mode of delivery—face-to-face, distance, mixed mode	Availability of quality flexible learning materials
Block periods of learning	Availability of tutorial support
Pattern of attendance—Number of hours per week attendance	Use of range of learning strategies appropriate to students' learning styles
Flexibility of delivery	Quality, level of teacher/trainer/student interaction within course
Timetabling to fit in with other lifestyle considerations	

The range of factors identified in table 4 accounts partly for the lack of empirical research into the relationships between any of these factors and course completion. Clearly it is difficult to design investigations which can control for more than a few of these factors.

Research into these issues has taken a number of directions. One focusses on identifying the personal characteristics of those students who successfully complete courses or who leave prior to completing courses in which they enrol. A second approach goes beyond the personal factors and looks at the broader range of reasons why students may leave prior to completion. A third approach has an evaluative intention and focusses upon individual courses or groups of courses and tries to determine patterns in the completions.

The characteristics of students who do not complete courses

Beswick et al. (1999) examine the impact within traineeships on completion rates of factors such as the personal characteristics of trainees—their age, gender, educational attainment and prior unemployment duration.[25]

Table 5: Personal factors and non-completion of traineeships

	Non-completion rate (%)	
	1995	*1996*
Age		
15–19	41.8	42.8
20–24	44.2	45.3
25+	43.5	44.4
Gender		
Male	43.7	45.5
Female	41.9	42.1
Education		
< Year 10	61.6	58.6
Year 10/11	47.9	48.4
Year 12+	34.9	36.2
Unemployment duration		
< 1 month	36.6	35.8
1–6 months	45.1	43.6
6–12 months	46.7	48.8
12+months	50.5	55.0

The study suggests that trainees with lower levels of educational attainment and those who had been unemployed for longer periods prior to commencing a traineeship were most at risk of failing to complete. In addition, there are several interactions which occur between age, education and unemployment duration. To some extent, age offsets some of the negative impact of low levels of education. Likewise education level offsets some of the negative effects of unemployment.

Students' reasons for leaving a course prior to completion

Many studies have been undertaken to ascertain the views of students who stay in their programs to completion. NCVER, for example, undertakes an annual Graduate Destination Survey of students who have completed a course at Certificate, Diploma or Advanced Diploma level of more than 200 hours duration. Fewer studies, though, have been carried out which involve interviewing students who have left their courses prior to completion.[26]

One such study (Dawe 1994)[27] presents the results of a mail questionnaire survey of students who were enrolled in a course in 1992 but who withdrew or did not complete the course in 1992. Students were presented with a range of employment reasons, study reasons and personal reasons which might influence their decisions to leave a course and asked to identify the main reason for not re-enrolling. Of the 4450 responses received (from over 16 000 questionnaires sent out), only 58% of respondents had actually withdrawn and not completed the course in which they were enrolled. Of the 'real withdrawers', the main reasons given for withdrawing or not re-enrolling in 1993 were as follows:

- I started a job. (14.8%)
- I transferred to another course. (12.4%)
- There were too many pressures on my time. (11.4%)
- The course no longer related to my plans. (7.1%)
- Family reasons prevented me from continuing. (6.2%)
- I had gained what I wanted from the section of the course I had completed. (5.9%)

The reasons for not re-enrolling provided as options in Dawe's survey along with respondents' replies are summarised in table 6.

Table 6: Reasons for not re-enrolling in course in 1993

Employment reasons (%)	
I started a job	14.8
I changed jobs	3.7
I started on a Government scheme e.g. traineeship	1.2
My employer withdrew me from the course	0.9
I lost my job	2.1
Study reasons (%)	
I only wanted to study a single subject/module to count in another course in which I am also enrolled	0.9
I had gained what I wanted from the section of the course I had completed.	5.9
My educational background was not suitable for the course	1.5
I was failing in the course	2.0
I transferred to another course	12.4
The course no longer related to my plans	7.1
The course was not what I expected	4.7
I found the course too hard	2.3
I disliked the course	1.9
I disliked the way it was taught	5.1
Personal reasons (%)	
I moved from the area	3.0
I was sick	4.6
Family reasons prevented me from continuing	6.2
My needs for childcare were not met	0.9
Financial reasons prevented me from continuing	4.2
There were too many pressures on my time	11.4
I had difficulty with transport	1.8
I could not get suitable accommodation	0.0

Source (Dawe 1994)

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In another study, Hansford & Duncan[28] found that the key reasons given by students who had left five TAFE courses prior to completion were primarily personal—work commitments, lack of interest in the course, health problems as well as problems related to the course such as level of difficulty and course workload.

Beswick et al.[29] surveyed almost 1700 trainees who did not complete traineeships in which they were enrolled. The main reasons offered by the trainees for leaving prior to completing included:

- being laid off (17%)
- the business going broke or changing owner (16%)
- personality clash/harassment (14%)
- pay too low (11%)
- personal reasons (11%)
- poor training/support (6%)

Of those trainees who voluntarily left their traineeships, when asked about the level of importance of each of the following reasons, factors relating to job rewards and job satisfaction were the most commonly mentioned:

- The wages were too low (45%—important/very important)
- I didn't want to remain in the industry (29%—important/very important)
- I was getting training in skills I already had (34%—important/very important)
- 34% found the training 'too easy'. These former trainees were more likely to hold negative views regarding their traineeship experience. Fewer of them felt that they had benefited from the traineeship (60% cf. 76% of those who had not found the training easy). Fewer of them agreed that the trade-off of lower wages for training was fair (56% cf. 70%). Fewer of them would consider doing another traineeship (63% cf. 69%).

Smith[30] reported that available research and anecdotal evidence suggest that the major reasons for the high non-completion rate of trainees and apprentices include:

- inadequate vocational preparation in schools
- language, literacy and numeracy and general reasoning skills that are less than those required to succeed at apprenticeship level
- inadequate learner support processes and structures during the apprenticeship
- declining teaching standards among VET providers (including the public provider)
- inappropriate/low quality learning (as opposed to curriculum and syllabus) materials available to students (particularly for those whose traineeships lack an institutional learning component)
- concerns about the inability of students to cope with the increased use of learning technologies as a substitute for face-to-face teaching/instruction

Of course, a further reason students may leave prior to completing a course is that they never had any intention in the first place to complete the course:

> *... many people who enrol in TAFE study do so to pick up the skills (units) they want for their immediate purposes rather than to complete total programs.*[31]

In 1996, almost 40% of all TAFE students undertook only one module of study for the year, where a module on average represents some 30–40 hours of study. This reflects the fact that many people, particularly those already in the workforce, enrol in TAFE with the intention of only completing specific modules of immediate interest.[32]

This raises the issue of what students' intentions are when they enrol in VET courses. Information is available about the intentions of students who have 'graduated' from the system through the information available in the Graduate Destination Survey results, although this information is retrospective rather than prospective. However little information appears to be available, aside from that which is mostly anecdotal, about the intentions of students who leave prior to completing a course. The Steering Committee for this project determined that it was important to examine this as part of the work of the project.

Recent studies

A number of recent studies have been undertaken which provide information about factors which may or may not be linked with course completion.

Misko (1999) reports the results of an investigation into whether delivery factors might be linked with student outcomes. Her study involved the analysis of student outcomes from the national VET collection in six different discipline groupings and responses to a questionnaire survey by 769 students from TAFE institutes in four States. She concludes that it is difficult to determine a direct relationship between modes of delivery and student outcomes. 'The analysis has been unable to provide definitive answers as to which strategy needs to be put in place to best ensure consistent successes for all clients.'[33]

Beswick et al. (1999) suggest that completion rates of traineeships are greater in some industry areas than others. They found that completion rates for trainees undertaking small business and hospitality/tourism traineeships were lower than for other traineeships. Both of these traineeships allow training to be undertaken entirely on the job. The authors suggest that it is possible that discontent with the training provided in these two traineeships contributes to their high non-completion rates.[34]

A number of projects have focussed on module completion and the factors which promote module completions. Some of these are unpublished. NCVER (1999)[35] examined factors which are linked with module completion. Though it was focussing on module rather than course completion, a number of its findings would appear to have potential relevance to this project:

- There is no single factor or combination of factors which explains module load completion rates at State or institute level.
- The factors most strongly associated with module completion rates included course length, stream group, broad field of study and industry, module length and institute.
- Factors less strongly associated with module completion rates included module area of learning (discipline group), delivery strategy, employment status, sex, disability, funding source, age group, highest school level completed, post-code region.

Another recent study is that of Mantz Yorke (1999)[36] who surveyed students from six higher education institutions in the north-west of England who withdrew during the first year of their course. The survey included a list of 36 reasons which students might give for leaving prior to completion. Students were asked the extent to which each of the reasons had impacted on his or her withdrawal from the course. The reasons most highly ranked were as follows:

- chose wrong course of study
- program not what I expected
- lack of commitment to the program
- financial problems
- teaching did not suit me

- insufficient academic progress.
- needed a break from education.

The reasons varied depending on how respondents were grouped. Young students, for example, selected reasons such as wrong choice of program, problems with accommodation and homesickness more frequently than older students. In contrast, older students tended to give reasons relating to personal circumstances such as financial problems, the needs of dependants, lack of support from family, the demands of employment whilst studying and travel difficulties.

Yorke analysed the results using principal components analysis with varimax rotation[37] and identified a seven-factor solution accounting for 45.0% of the variance in his results. The seven factors he named as follows:

1. poor quality of the learning experience
2. inability to cope with the demands of the program
3. financial and other interpersonal problems
4. dissatisfaction with aspects of institutional provision
5. unhappiness with the environment of the institution
6. wrong choice of program
7. lack of peer support

Course structure

Early in the project, information was sought from agencies throughout Australia about course structure approaches which have been used in recent years. States and Territories were asked to provide any key documents relating to course design and, where available, information illustrating model approaches to course design. Typically, the reply was, that State policies and procedures relating to course development during the previous years had largely been guided by national processes for course accreditation, and more recently by national moves to implement training packages.

Several States provided examples of course structure innovations. However, it is reasonable to say that, in general, each of the States and Territories had in place, through its appropriate State training authority, a set of procedures which were consistent with national approaches to curriculum development. These approaches were underpinned by a range of nationally-developed policies, guidelines and frameworks, some of which include:

- *Users' guide for course design* (ACTRAC 1994)[38]
- *Guidelines for customisation*[39]

These documents provide a standard set of definitions, one of which is 'course':

> *A structured sequence of vocational education and training that leads to the acquisition of identified competencies and, which if submitted for accreditation, would lead to a qualification.*

Aspects of course structure

Section 2 of the *Users guide for course design* specifies the description required to complete the course template which is part of the accredited curriculum documentation. Nationally-agreed templates for courses require the following information:

- course name, qualification, ASF level and nominal duration
- course development—including evidence of meeting industry needs
- course outcomes—including relationship to competency standards, inclusion of general competencies, recognition given to the course
- course structure—including core and elective modules, sequencing of modules within the course, alternative structure including strands or streams, requirements to receive the qualification, exit points, requirements for on-the-job training, entry requirements, RPL
- assessment
- delivery of the course—including any delivery modes which are essential to this course
- articulation and credit transfer
- ongoing monitoring and evaluation

In addition, the *Users guide* outlines a range of issues to be considered when designing a 'course structure'. These include:

- The sequencing or clustering of modules should reinforce learning experiences by building on competencies previously required.
- The course should identify whether modules are essential for all students (core modules), essential for particular groups of students or sectors of industry or occupations (stream or strand modules) or relevant to small groups of students (elective modules). This type of course structure ensures that students develop the essential or broadly-based underpinning competencies before electing to pursue more specialist streams of study and electives to suit their training needs.
- As learners progress through the course there may be points at which they could leave with recognised employment or educational outcomes. These flexible entry and exit points need to be accommodated within the course structure.

The course structure checklist at the end of the chapter states that, through consultations with stakeholders, those with responsibility for developing courses should be able to identify the following:

- strategies for determining the structure of the course
- accredited courses and modules that may be suitable for inclusion or adaptation
- sequencing of modules
- module selection rules
- requirements to receive the qualification
- exit points
- on-job training required to complete the course
- options for customisation by other industry or enterprise or client groups
- entry requirements
- any special arrangements for the recognition of prior leaning

That the *Users guide* specifically requires that stakeholders be involved in identifying strategies for determining the course structure, highlights the fact that course design is not a predetermined process. The process of developing a course is iterative, with the end product of the design process reflecting the philosophical, political and social perspectives of the participants in the process.

Further information about course structure is included in the *Guidelines for the customisation of accredited courses* (1998)[40] which identifies the following features as necessary aspects of a course structure:

- The course should be designed using a flexible structure.
- Provision should be made for elective units of competency and/or modules where possible to create pathways to suit enterprise needs and individual aspirations.
- Where possible, the identification of rigid streams which do not take into account the diversity of training needs should be avoided.

Factors promoting changed approaches to course structure

Through the 1980s and 1990s, a range of external factors have created considerable pressure to develop course structures which are more flexible and more responsive to the needs of industry. The introduction of competency-based approaches to course design and course delivery have resulted in the modularisation of courses comprised of packages of modules or units organised to meet industry needs. Such approaches reflect industry's need for training which is more responsive, offering just-in-time approaches to the provision of training.

A further theme in course design has been the emphasis on improving access through provision of flexible pathways, multiple entry and exit and the recognition of prior learning. These changes have promoted the development of a range of course design innovations such as 'embedded' course structures in which lower-level qualifications are completely embedded within higher-level qualifications.

The question arises of the impact, if any, the changes in the way courses have been structured through the 1980s and 1990s have had upon course outcomes—and more specifically course completion. Pillay and Brownlee (1996), for example, ask whether through the process of providing greater access and flexibility we are having any impact upon the level of understanding gained by students in training programs:

> *Extensive energy has been expended in formulating complex pathways to provide opportunities for workers to acquire knowledge and understanding and to develop transfer skills. By providing a number of pathways to acquire knowledge and skills we may increase the accessibility to learning opportunities and yet not affect the level of understanding acquired by trainees ... Merely providing multiple pathways may not be sufficient to achieve the objectives of developing understanding, ability to transfer knowledge and skills and enhancement of performance.*[41]

Some concerns have been expressed that the demands to meet industry needs, through making course structures more flexible, has resulted in a focus on meeting the short-term needs of specific employers—to the disadvantage of the long-term interests of both individuals and businesses. Smith reports the concerns of teachers who believe that because of modularisation students are failing to develop a wider view of their industry area:

> *students [a]re losing the broader picture or the wider context of the subject/trade that they were learning ... [Teachers] felt that there was no structure in place which allowed the student to look at the broader picture and apply general principles.*[42]

Again though, it would appear that many of these concerns are anecdotal and that few studies have empirically examined the positive or negative effects of changes in course structure on course outcomes and, more particularly, course completions.

The connection between course design and delivery

A key issue for research into the impact of course structure on course completion is the related concern of what the particular course structure looks like when it is actually

implemented and delivered. From the student's perspective, what is finally 'received' by the student is the combination of decisions made both by course developers and those responsible for delivering the course—including college managers, teachers, workplace trainers, etc. The student does not see the course structure as an accredited curriculum document, but rather as an experience in which course structure is inextricably intertwined with course delivery. From the students' perspective it is not important, or even apparent, whether decisions about, for example, what modules are to be offered in a particular course, were made by a course developer or a college manager.

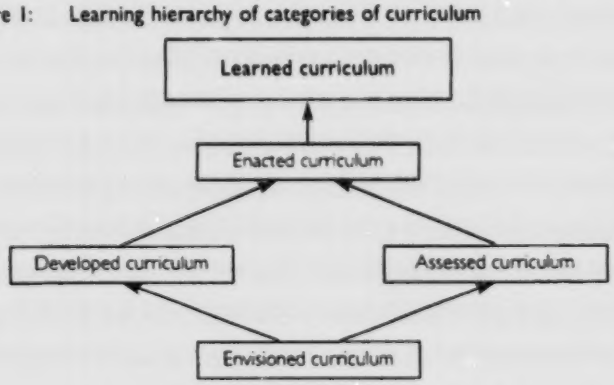
Butler[43] provides a framework of five curriculum levels which assist in understanding the interconnectedness of course structure and course delivery. The framework has been employed within school and university education contexts and could valuably be employed within the VET sector as well, whether in relation to traditional 'curriculum' or newer training packages.

The five levels of curriculum outlined by Butler are:

- *Envisioned curriculum*—the 'global aim, the statement of the 'good', the image of the successful learner, or the profound educational ideal', that is offered to the teachers and providers, and to learners who undertake this curriculum.
- *Developed curriculum*—a working document of some sort that is derived from the vision to guide the teaching and learning. It can be one or more of the following: a statement of objectives, a catalogue of subject matter content, a list of competencies, a program of suggested teaching strategies, the minimum number of contact hours or a textbook. Nationally endorsed course templates and training packages would, within Butler's framework, fit within this category of 'developed curriculum'.
- *Enacted curriculum*—the actual learning activities that take place in a classroom, the workplace, a lecture theatre, a laboratory, the student's home. The enacted curriculum also reflects local decisions about how a program is to be delivered, decisions about resources and so on.
- *Learned curriculum*—what each student actually learns from being engaged in the learning activities, reading the materials and interacting with the teacher, trainer or other students. It will be a mix of aspects that were intended as well as other unintended learnings.
- *Assessed curriculum*—the actual modes of learning and the selection of content that the assessment process focusses on and draws from the students.

The five levels can be arranged in a learning hierarchy which has at its pinnacle what has actually been learned by the student or trainee (figure 1).

Figure 1: Learning hierarchy of categories of curriculum



Butler suggests that the ideal learning system would ensure that these five 'curriculum levels' are tightly integrated. The chosen vision would be developed, enacted, learnt and assessed in a coherent process. However, the literature suggests that such coherence in educational programs is very difficult to achieve.[44] Partly, the reason for this is the degree of 'translation' which occurs at each of the levels. The 'vision' as perceived by, say, an ITAB is turned into a course or training package by course developer(s) who, within the constraints in which they operate, translate the intentions of the ITAB. Teachers and trainers in a college or workplace in turn, interpret these documents and translate them into courses and training programs, again within the context of local opportunities and constraints. The process of translating at each level occurs within the context of the individual worldviews of the participants. Coherence assumes that there is shared understanding of 'the vision'.

Clearly with this framework in mind, 'course outcomes' depend on a broad range of factors at each of the levels—and, in practice, it will be difficult, if not impossible to attribute any change in course outcomes to any single factor at one or other levels. [If this were so, we would be able to address seriously questions such as 'If we change the wording of the competency standards in this way, what impact will it have upon course completions?'.]

Relationships between course completion and course structure reported in literature

As indicated earlier, there is little empirical research in the literature which has examined the relationship between course structure and course completion. Moy[45] has recently completed an extensive review of the literature in which she identifies the following course design features as being particularly significant to VET practitioners, students and employers:

- the use of flexible approaches and planning for flexible delivery at the curriculum design stage to facilitate and maximise flexible delivery options (Frankham 1996; Valcke & Martens 1997)
- the inclusion of broad-based curriculum outcomes, quality teaching and learning support material, stranded course structures and opportunities for the customisation of modules in curriculum design to enhance the potential for flexible delivery
- the course meets current workplace requirements through up-to-date content (ANTA 1995; OTFE 1997; Hansford & Duncan 1996)
- provides opportunities for work placements and practical 'real work' experiences (OTFE 1997; Hansford & Duncan 1996)
- fields of study with greater module loads usually have significantly lower completion rates
- offering a common first year in some course areas facilitates more informed decision making by students at the end of that period

However, as she points out, there is a question about the extent to which the conclusions reached in these studies are based more upon largely intuitive perceptions of key informants than empirically-derived evidence.

A Victorian study[46] looking at module completion rates suggests that:

- Trade certificate courses have higher completion rates than higher level courses in the same industry areas.
- Fields of study with greater module loads tend to have significantly lower completion rates.

Foyster et al.[47] suggest the following relationships between course structure and course completion:

- Shorter courses have higher completion rates.
- Failure rates are higher for two-year courses compared with one-year courses.
- There is substantial variation by stream of study.

Empirical research which goes beyond the relationship between course completion rates and course structure factors aside from stream, field of study or duration, however, appears to be almost entirely absent from the literature.

For this reason this study has attempted to focus upon a limited range of course structure factors such as:

- number of modules to be completed in order to attain the qualification
- whether the course had a core-only or a core/elective structure
- number of core and elective modules students are required to complete in order to complete the requirements for the qualification
- number of electives from which students choose their electives
- the proportion of elective hours available which students are required to complete
- whether or not the course was graded or non-graded for which quantitative measures may be determined from course documents

Other course structure features such as module selection rules, prerequisites, sequencing, stranding of modules, requirements for on-the-job training, RPL, entry requirements and assessment strategies may all potentially impact upon completion rates and for this reason, it would be interesting to include them in the study. However, because of the difficulty of determining quantitative measures for these factors, they have largely been excluded from this study.

2 Methodology

Introduction

This chapter provides an outline of the methods which were employed during the project.

Given the range of variables outlined in the previous chapter, which may impact upon course completion rates, it is difficult to conceive a methodology which incorporates a level of rigour sufficient to enable the confident identification of relationships between course completion rates and all other variables. For this reason, the research was always envisaged as 'preliminary'—with a key purpose of identifying tentative relationships which might be further explored in subsequent research.

The initial project brief expressed the areas of interest for the project in a number of research questions:

- What is the range of values for course completion rates?
- What is a low/high course completion rate?
- Does completion rate vary with any of the course structure variables which are documented in accredited curriculum?
- What is the quality of course completion data?
- What issues are there in obtaining course completion data?
- What completion patterns can be seen within the data?
- Are there natural groups of modules which non-completing students complete prior to leaving the course? If yes, are there course structure reasons or other reasons which explain these groups?
- Is there any evidence that there are sub-parts of courses or particular groupings of modules which meet the employment or vocational training requirements of particular groups of students?
- Are students more likely to complete courses where they can choose modules to meet their particular learning needs (compared to courses with rigid inflexible structures)?
- Are graduates/non-completing students' reasons for completing/leaving a course related at all to aspects of course structure?

Because of difficulties in accessing appropriate or reliable information, a number of the initial intentions of the project were modified during the project. A number of paths followed during the project led to dead-ends; others have provided information which hopefully will be of interest to systems. The dead-ends and difficulties met through the project have meant that it has been possible to address some of the objectives more adequately than others.

The project phases

Essentially the methodology involved a number of phases.

a. A first brief phase in which the intention was to identify approaches to course structure in the context of VET. The results of this phase of the work have been incorporated where appropriate elsewhere in the report.
b. The next phase involved the calculation of course completion rates based upon the analysis of enrolment and course completion data for a range of courses provided by three States—New South Wales, Victoria and Western Australia. The course completion rates were correlated against a variety of course structure factors documented in accredited curriculum with the intention of identifying tentative relationships between course completion rates and course structure factors. The results of this work have been summarised in chapter 4.
c. A more intensive investigation of data relating to a small number of courses. In particular, this aspect of the study included the analysis of 700 phone interviews with previous students of TAFE courses with the intention of identifying students' reasons for not completing courses in which they were enrolled. The results of this work are presented in chapter 5.

Each of these phases of the methodology is discussed in more detail in the following sections.

A key issue for the research has been the range of differences which exists between the various States involved in the project. These issues are discussed throughout the report. From the point of view of accessing data for the investigation, organisational processes in each of the States have meant that the methodology has had to be tailored to suit each State's system and provider policies. In addition, during the analysis, care has had to be taken to avoid making inappropriate comparisons between the various States.

Identifying recent approaches to course structure in the context of VET

Early in the project, work was done to identify course structure approaches which have been used in recent years in the various States/Territories. Each State/Territory was asked to provide key documents on approaches to course structure.

This work was limited by the range of papers and documents provided by the States/Territories. As indicated in chapter 2, typically the reply was that State policies and procedures relating to course development during the previous years had largely been guided by national processes for course accreditation, and more recently by national moves to implement training packages. The few documents provided were examined and concepts relating to 'course structure' and 'course delivery' were identified and listed. It was intended at this early phase of the project to develop a 'typology' of possible VET course structures which then could be used to provide a framework for the rest of the project.

Subsequent to this preliminary work, the focus of the project was re-negotiated with NCVER. It was decided that the project should not undertake detailed work to develop a typology of courses—but should instead focus on the relationships between course structure factors and course completion rates. Nonetheless, this early work served to highlight a range of issues in defining course structure.

A preliminary investigation of completion data

This phase of the project involved the calculation of course completion rates using data provided by three States—New South Wales, Victoria and Western Australia—and the development and testing of tentative relationships between course completion rates and

course structure variables documented within accredited curriculum. This work involved obtaining student enrolment and course completion information as well as course structure information from each of the three States involved in the study.

Different approaches had to be used to access the information given the different approaches to information management which are used in each of the three States.

Initially data were provided by New South Wales which were used to hypothesise relationships between course structure and course completion. These hypotheses were then tested using data provided by Victoria and Western Australia.

Calculation of course completion rates

As discussed in chapter 2, none of the States routinely calculates course completion rates. Nor are there agreed approaches or formulae for the calculation of course completion rates. For the purposes of this project, course completion rates were calculated using the formula:

$$\text{Course completion rate} = \frac{\text{No. of students who had completed requirements for the qualification by Dec 1998}}{\text{No. of students who first enrolled in year—No. of students still enrolled in 1999}}$$

It was recognised that there will be courses where students will still not have completed courses even after a number of years. For example, in the case of the Advanced Diploma in Accounting, part-time students regularly take five to eight years to complete the 26 modules of the course. It is for this reason that students still enrolled in the course in 1999 were excluded from the calculation.

The data provided by the States

New South Wales

In New South Wales, student enrolment and subject/course results are centralised in a Student Information System.

Courses were selected from across the range of TAFE NSW courses offered in 1995 and 1996—with courses from each of the Education Services Divisions included and courses spread across the full range of streams and RATE/AQF levels. A list of the courses included in the sample is included in appendix A.

For each of the courses, the following information was sought:

- number of students first enrolled in the course in 1995 or 1996
- number of students first enrolled in 1995 or 1996 who have completed the requirements for the qualification
- number of students first enrolled in 1995 or 1996 who are still enrolled in the course.

For each of the courses for which data was provided, accredited course information was examined. Relevant information relating to course structure was extracted from the centralised Course Information System and recorded (see appendix A). As discussed in chapter 4, a key concern was how to represent the range of course structure features using a set of measurable variables which can be derived from accredited or published course documentation. The factors which were selected and which came closest to meeting this requirement included:

- AQF/RATE classification
- stream of study
- nominal duration of the course

- number of modules to be completed in order to attain the qualification
- whether the course had a core-only or core-elective course structure
- the number of core modules students are required to complete in order to complete the requirements for the qualification
- the number of elective modules students are required to complete in order to complete the requirements for the qualification
- the number of electives from which students choose their electives
- whether or not the course was graded or non-graded

Western Australia

Course structure information relating to 115 courses was provided in electronic format. Relevant course structure information was extracted and incorporated into a grid similar to that produced for New South Wales courses.

Of these 115 courses, information relating to student enrolments and course completions was provided for 65 courses. Information provided included:

- number of students first enrolled in the course in 1996 or 1997
- number of students first enrolled in 1996 or 1997 who are recognised as 'qualification completed'
- number of students first enrolled in 1996 or 1997 who are still enrolled in the course

The distinction between 'completing the requirements for the qualification' in New South Wales and 'qualification completed' in Western Australia needs to be emphasised. In New South Wales, students are automatically awarded a qualification on completion of the requirements for a course. In Western Australia, students have to apply for the award of a qualification once they have completed the requirements for a course. Consequently the two measures of 'course completion rate' are in fact measuring what may be different things.

Victoria

Data were provided relating to approximately 364 000 'derived course enrolments' in over 360 courses.[48] The file relating to students who first enrolled in 1995 provided information about the number of students who first enrolled in each course in 1995, as well as data about the number of students who continued in the course and who completed the requirements for the qualification in subsequent years. A number of problems arose for the project in determining what parts of the data provided were sufficiently accurate to use in the analysis. These are discussed in chapter 4.

The number of students continuing courses in 1998 in which they first enrolled in 1995 was, in most cases, very small. Consequently, the effect of students who might be continuing courses in 1999 was ignored in determining course completion.

Accessing historical information about Victorian courses was more difficult than for Western Australia and New South Wales. Responsibility for curriculum information and course maintenance in Victoria is decentralised. In addition, course documentation is not archived in an electronic form. Course structure information relating to only 44 of the courses for which completion rates were calculated was obtained.

Analysis

Analysis of data from the States involved three main stages: statistical relationships between single course structure factors and course completion rates; multiple regression to further

explore the relationships between various course structure factors and course completion rates; and comparing courses with highest and lowest completion rates for the three States.

More detailed studies of a small number of courses

The methodology outlined in the project brief included the carrying out of a number of more detailed investigations of a small number of courses. Though these investigations were referred to as 'case studies', the intention was not to use the 'thick description' or qualitative case study approaches described by Guba & Lincoln.[9] Instead, it was intended to undertake investigations which were more limited in scale, utilising quantitative data available about student enrolments, student progress and completions in each of the courses.

There were three components to these investigations:

- obtaining student module completion information and analysing the data to investigate personal and other factors which are linked to course completion and whether there appeared to be any patterns in the combinations of modules or the pathways students took as they completed modules in the course
- interviewing appropriate officers about their perceptions of the information arising from the analysis of the student module completion data
- undertaking phone interviews with past students about the reasons they left their courses prior to completing

Analysis of data focussed on possible reasons for the differences between course completion rates in the various contexts—and whether these relate to course structure variables or to other variables including institute or student personal factors (including employment status/change of employment status, gender, NESB, age, previous work experience).

Phone interviews to assess the impact of course structure

A key part of the work in the case studies involved interviewing previous students of VET courses in the three States about the reasons they left their courses prior to completing.

Phone interviews were conducted with 762 past students of VET courses in the three States involved in the study: New South Wales, Victoria and Western Australia.

The interview schedule (appendix A) comprised four sections:

Section A: This section dealt with the students' main reasons for enrolling in the course; whether or not they intended when they enrolled to complete the whole course; the importance they attached to the qualification; and whether they achieved their reason for doing the course.

Section B: This section asked about delivery mode; the number of modules students had completed; whether they completed the qualification. If students said they had completed the qualification, the next group of questions, section C, was omitted.

Section C: This section asked students to estimate on a four-point scale the extent to which each of 58 given factors influenced their decision to leave the course before completing it.

Section D: Four questions about students' employment situation during the course; whether they changed their enrolment and whether they have undertaken further VET study since leaving their course.

New South Wales

Contact names and addresses were made available by Student Administrative Services for 18 297 students who first enrolled in nine TAFE NSW courses in either 1995 or 1996 and who left prior to completing their courses. The nine courses were as follows:

- Advanced Diploma in Accounting
- Associate Diploma in Architectural Drafting
- Associate Diploma in Building
- Associate Diploma in Child Studies
- Certificate II in Hospitality Operations
- Certificate III in Information Technology
- Diploma in Information Technology (Programmer/Analyst)
- Associate Diploma in Library Practice
- Associate Diploma in Mechanical Technology

Within a course the phone numbers of past students contacted were randomly selected. No effort was made to weight the sample according to institute attended, gender, language spoken at home, employment status at time of enrolment or any other personal factor. Nor, given the diversity in course enrolments, was any attempt made to weight the numbers of respondents according to cohort size in each of the courses—since this would have meant relatively large samples in some courses and very small samples in other courses. Instead, the interviews were spread across the nine courses so that roughly similar sample sizes were achieved for each of the courses.

Victoria

A sample of six courses was selected on the basis that enrolments in these courses were sufficient to provide a list of contact names and addresses for the interviews. The six courses were:

- Certificate in Office Administration
- Certificate in Engineering (Mechanical Engineering)
- Associate Diploma of Business (Marketing)
- Advanced Certificate in Information Technology
- Associate Diploma of Business (Accounting)
- Apprenticeship Certificate in Cookery

Four metropolitan institutes were invited to provide the names and contact details of students who first enrolled in these courses in 1995. In total, the contact details of 3082 students were made available. No information was available about whether or not students in the list supplied had completed their course, nor how many or which modules they had completed.

Western Australia

A sample of eight courses was identified by Western Australian personnel on the basis that these courses were most similar to those in the New South Wales sample. The eight courses were:

- Certificate III in Engineering (Automotive)
- Diploma in Children's Services
- Diploma in Health Science (Massage)

- Diploma in Building Design & Drafting
- Diploma in Building
- Advanced Diploma of Accounting
- Certificate III in Information Technology
- Diploma in Information Technology

Each of the 28 colleges in the Western Australian system were invited to participate in the project and to provide names and contact details of students who enrolled in these courses for the first time in 1996. In the end, information relating to 5838 students enrolled at five colleges was made available to the project. As for the Victorian data, no information was available about whether or not students in the list supplied had completed their course, nor how many or which modules they had completed

A number of methodological problems

Initially it was intended that stratified random sampling techniques would be used to select the students for the interviews. However, given the various processes and methods required to select courses and colleges and to obtain the student contact details in each of the States, the randomness of the sampling was limited.

In addition, it was always recognised that there would be methodological problems arising from the length of time since students had originally enrolled in their courses. It was expected that many students would have shifted addresses and changed phone numbers, with the consequent problems of sampling bias.

The samples from the three States were different in a number of substantial ways:

- In both Victoria and Western Australia, colleges volunteered to be involved in the research and provided data which was available. No effort was made to follow up those colleges which chose for one reason or another not to participate.
- For each of the three States, the numbers of contact names and addresses provided did not match the figures for enrolments in the respective years. No effort was made to ascertain the reasons for these discrepancies.
- The courses selected in each State were different.
- Only with the NSW data was it possible to identify beforehand students who had not completed their courses and to use this as a basis for selecting students to be involved in the interviews. In the case of Victorian and Western Australian students, it was not possible to ascertain which students had or had not completed their courses. As a consequence, it was necessary to accept the students' response to the question 'Did you complete the qualification?' since there was no other basis for making a decision about this. Where students replied that they had completed the qualification, they did not take part in section C of the interview which examined student's reasons for leaving courses prior to completing their courses.
- There is the problem always present in post-hoc studies of the reliability of student responses and whether or not students are willing or able to give accurate reasons for leaving, particularly given the duration since leaving their courses.

Within the context of this 'exploratory' project it was not possible to control for all of these potential methodological problems.

A private telephone interviewing company was contracted to undertake the interviews which lasted on average about 13 minutes each. The analysis of the data obtained from the interviews is presented in chapter 5.

3 Course completions and course structure

Introduction

The results are presented in this and the following chapter. This chapter provides an overview summarising:

- the results of the analysis of the three States' completion rates
- the relationships between course structure factors and course completion rates
- the issues and difficulties in obtaining, interpreting and comparing data

The following chapter presents the results of the student phone interviews.

What aspects of course structure were investigated?

A range of features can be determined from course documents which either explicitly or implicitly provide information about course structure. For the work in this part of the project, a key concern was how to represent the range of course structure features using a set of understandable, measurable variables which can be derived from accredited or published course documentation. The selected factors which came closest to meeting this requirement included:

- AQF/RATE classification
- stream of study
- nominal duration of course (nominal course hours)
- number of modules to be completed in order to attain the qualification
- whether the course had a core-only or a core-elective course structure
- number of core modules students are required to complete in order to complete the requirements for the qualification
- number of elective modules students are required to complete in order to complete the requirements for the qualification
- number of electives from which students choose their electives
- whether or not the course was graded or non-graded

In addition, a range of derived variables can be calculated based on these factors:

- average module duration (e.g. 31 modules in a course of total duration 1343 hours = 51.7 hours)
- the proportion of the nominal course hours which are 'core' (e.g. 216 core hours in a course of total duration 864 hours = 0.25 hours)
- the proportion of elective hours available which students are able to select (e.g. students select 162 hours of electives from a total range of 1260 elective hours = 0.129 hours).

A number of problems arose when attempting to use the course features listed above as measures of course structure.

Several of the features, in particular AQF/RATE classification and stream of study, are not explicitly about course structure. Nonetheless they implicitly indicate aspects of course structure, for example nominal course hours or the organisation of electives. It may be that structural features associated with particular streams influence completion rates.

Other factors such as core-only or core-elective structure are clearly related to course structure. Nonetheless, there are considerable concerns about their interpretation and measurement.

Nominal course hours

Even a seemingly straightforward course structure factor such as 'nominal course hours' can become complicated. Usually course duration is expressed as a single figure and is reported in AVETMISS as such. However, in many cases the course documentation which was examined as part of this project gave nominal duration as a range of hours. For example, in one course, an Associate Diploma of Business, the course duration appeared from the course documentation to be in the range 782 to 1151 hours. In this particular course, the range occurred for two reasons:

- Nominal hours for individual modules in the course are frequently expressed as a range of hours (for example, 34–51 hours).
- Depending on the particular elective stream selected, students may complete anywhere between 68 and 216 hours of electives.

Average module duration

Determining a measure of 'average module duration' was complicated by a number of factors.

Firstly, because the number of modules completed by students within the nominal course hours can vary depending on module choice, a measure of 'average module length' depends on whether students select a lower or higher number of modules required by the course design.

Secondly, there are problems determining a meaningful 'average' module length in some courses in which the majority of modules may be quite short, but which contain one or more very long modules. In these cases, the average module length may be increased considerably through the influence of a few very long modules.

A third problem in determining average module duration arises where the nominal course hours and the sum of the nominal hours for the modules in the course do not agree. For example, in one course of nominal duration 400 hours, while the core modules had a total nominal duration of 425 hours. In addition, students were to complete between 62.5 and 71 hours of elective modules. The curriculum documentation explains this anomaly:

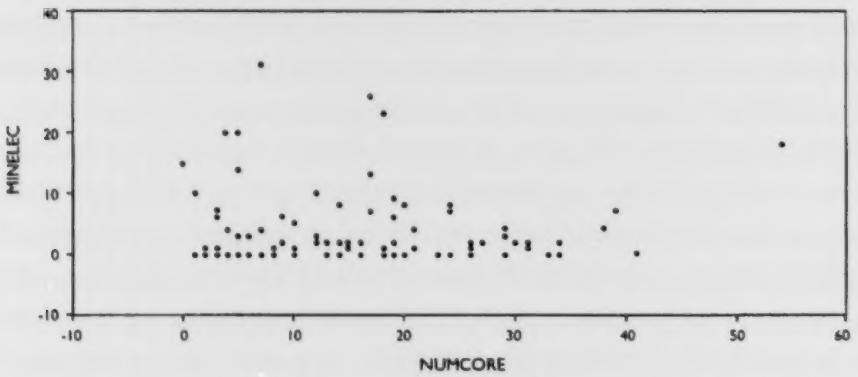
> *the student hours ... have been reduced in some modules to provide a total of 400 hours off-the-job training. The Training Plan for this program indicates the actual hours allocated for each module.*

Core-electives structures

Deriving measures able to represent the complexity of courses with core-elective structures was even more difficult.

While looking for ways of describing the core-elective and core-only structures of courses, consideration was given as to whether there might be some reasonably obvious types of courses based on the particular core-elective combinations (e.g. core-only, large-core/small elective range, small-core/large elective range, all-elective). To test whether or not such patterns might exist, a scattergram was constructed[30] of number of core modules vs. number of electives to be completed. Except for the obvious grouping of courses with core-only structures, no obvious clumping of points, representing different core-elective structures, was observed.

Figure 2: Scattergram of number of core modules vs. minimum number of electives to be completed



Elective choice

In relation to core-elective structure, a number of measures can be derived to represent the 'amount and flexibility of elective choice' available to students in their courses.

One raw measure of elective choice is given by the number of elective modules from which students select their electives:

ELECRANG = No. of elective modules from which students are able to select

A modification of this measure is the proportion of elective hours available which students have to select:

$$\text{ELECPROP} = \frac{\text{No. of elective hours students must undertake}}{\text{No. of elective hours available from which students must select}}$$

Again a number of problems were evident in using these measures.

Stranded and grouped modules

In some courses, the course structure allows for considerable elective choice on the surface—but because of subject groupings and streams within the electives, choice is considerably restricted. For example, one fairly typical core-elective course required students to complete four core modules, and then students had to select:

- one of four strands in Group 1
- four of five modules in Group 2
- four of eighteen modules in Group 3
- two of five modules in Group 4

The difficulty of representing the flexibility and elective choice in such a course structure is immediately apparent. None of the measures above adequately addresses the strand and group structure within the available electives.

Alternatively course electives may be grouped in several strands, with students required to undertake all or most modules in a strand. The choice they have here is which strand to choose. Again it is difficult to represent this situation in an 'elective choice' variable.

A further factor which complicates the representation of elective choice as a continuous variable is that in some cases, the modules available to students depend on them having appropriate prerequisite qualifications. For example, in a Certificate IV of Engineering, depending on the prior experience of students entering the course, they would be required to complete different modules. Students entering this course directly from HSC had much less choice than students entering from prior trade qualifications and were required to complete a group of 22 'elective' modules.

When is an elective module really a core module?

Similar problems arise in courses in which students are, at least on paper, able to select from a large array of modules available, but where because of particular licensing requirements the choice may in practice be considerably less. For example, in an Electrical Trades course, the course document allowed for students to select 18 modules from the NMEC bank, including ten from the Electrical/Electronic modules. However the general notes which supplement the course document add that in order to gain a Grade A Electrical Licence students have to complete, in addition to the core modules, 11 specified modules. In effect, 'elective' modules become core modules in the course structure.

Again the problem of representing these aspects of course structure as a continuous variable measure is considerable.

Completion rates

Before outlining course completion rates for each of the States involved in the research, it is necessary to caution against any direct comparisons between the results of the different States.

Clearly there are many differences between the various State systems which have provided data for this research.

Enrolment systems and processes

The enrolment systems and processes in each of the States vary with some States allowing for module enrolments.

In Western Australia, students may enrol in courses or in modules. The enrolment system (CMIS) operated by most public providers forces a course enrolment—and hence all enrolments are in courses. A student must enrol for each module they wish to undertake. Students wishing to enrol in only one or two modules contained in a course are reasonably common, particularly in the case of part-time students, but again the CMIS forces a course enrolment which as a result can sometimes have an arbitrary character.

The Victorian system is based on the notion that people enrol in modules to meet specific skill requirements. In addition, since institutes are largely autonomous, approaches to enrolment are likely to vary across institutes. In general though, all enrolments are at the module level. Module enrolment consists of a client enrolling at a training provider location in a module which is associated with a course.

In New South Wales, the priority is to provide programs which have an AQF qualification outcome. All enrolments are at course level. The issue of meeting the needs of those students whose primary intention is to enrol in specific modules, rather than courses, has been an issue because of the impact upon completion figures. This problem has partially been addressed by creating Statements of Attainment in which students are able to select the one or few modules they wish to do from a range of modules.

Determining in which course a student should or will be enrolled

Where a series of courses are related, for example in the case of embedded or nested qualifications, whether or not students enrol in the lower-level course or the higher-level course may vary according to context. The practice is not consistent across or within States or across colleges or courses.

Enrolling students in a lower-level course can have advantages for both the student and provider. Students may pay a lower administration charge. In addition, successful completion of the lower-level course can provide a 'filter' for entry to the higher-level course.

On the other hand, enrolling students in the higher-level course also has advantages. One of the significant reasons for enrolling students in a higher-level course relates to the fact that students may have to submit to competitive selection each time they move from one level of a nested course to another. For those aware of this requirement it is a significant incentive to enrol in the higher-level course from the outset to avoid the administrative hassle and guarantee a pathway through to the higher-level course. In addition, students can exit with lower-level qualification upon completion of the requirements for the lower-level award.

Some of the possible consequences for course completion rates of students enrolling in either a higher- or lower-level course in a series of embedded courses are discussed further in chapter 5.

The methods for determining when an enrolment is a 'course enrolment'

In Western Australia and New South Wales all enrolments are 'course enrolments'.

In Victoria, with its focus on module enrolments, enrolments in courses are derived from module enrolments. At the system level, the only indication that students have an intention of completing the requirements of a course is given by students enrolling and participating in multiple modules associated with a particular course. When a student enrols in a number of modules, an assumption can be made by the system that the student may want to complete the requirements for a course. This process of deriving the course enrolments, 'netting them out', essentially asks the question 'How many module enrolments has the student got which are associated with a particular course?'. The process involves examination of the modules in which students are enrolled and determining, where the student is enrolled in one or more modules, the course(s) with which they are associated.

Recognising when a student has completed a course

The processes for recognising when a student has completed a course vary across States. In both Western Australia and Victoria, the system recognises when students have completed the requirements for a qualification when students apply for the qualification. Students put

in a claim for a qualification at the end of their course after completing the requirements for a course. In New South Wales, students are automatically awarded a qualification once they have completed the requirements for a qualification. For many courses, identification of students who have completed the requirements for an award can be managed by the central information system. However, where courses have complex course structures, completion must sometimes be manually done by teachers in colleges.

As a consequence of these different approaches to recognising when students have completed the requirements for a qualification, 'completion rates' calculated on the basis of qualifications awarded under-represent the actual number of students who have completed the requirements for a qualification.

The course mix

The mix of courses provided in each of the States varies with some States providing relatively greater proportions of, say, higher- or lower-level courses. For example, table 1 in chapter 2 shows that Victoria awarded a proportionally higher number of Certificate II qualifications in 1997 compared with the Australian average. Likewise, the ACT and Queensland awarded higher proportions of AQF Diploma-level qualifications.

The calculation of an 'average completion rate' by aggregating State data across a sample of courses depends on the particular sample of courses selected. Given the likelihood of differences in course completion rates depending on the AQF level of a course or the stream or industry area from which the course comes, questions must be raised about the meaning and usefulness of such figures and comparisons.

The structure of the information systems and the quality of the data

The structures of the information systems in the three States varied. Though it was possible to obtain data on student enrolments and 'course completions' centrally in each State, the nature and completeness of this information depended on the degree of centralisation or decentralisation of the information systems.

Findings

New South Wales

For the study, 112 TAFE NSW courses were selected.. Enrolment statistics for the group of courses are shown in table 7. Enrolments in the courses which formed the sample ranged from 12 to 5334. Most courses had enrolments in the range 200– 800 students.

Table 7: Summary of enrolment numbers for selected TAFE NSW courses

Mean	767.2
Standard error	83.9
Median	448.5
Mode	212.0
Standard deviation	888.2
Minimum	12.0
Maximum	5334.0
Total number of enrolments	**85 921.0**
Count	112.0

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Completion rates for students who first enrolled in the 112 courses in 1995 were calculated for each of the courses according to the formula:

$$\text{Course completion rate} = \frac{\text{No. of students who had completed requirements for the qualification by Dec 1998}}{\text{No. of students who first enrolled in 1995—No. of students still enrolled in 1999}}$$

Likewise completion rates for students who first enrolled in a course in 1996 were calculated.

The weighted average completion rate for students entering TAFE NSW courses for the first time in 1995 was 36.9%. For students entering courses in 1996 the weighted average completion rate was 34.3%. The difference may be due largely to lesser time available for completion for the 1996 starters, given the timing of the research.

Identifying relationships between course structure factors and course completion

An overview of the results of the analysis of course structure factors and NSW course completion rates is presented below.

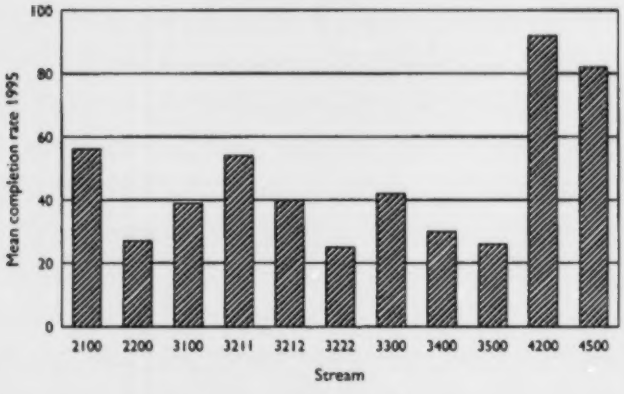
AQF/RATE levels and course completion rates

When courses were grouped by AQF/RATE level, there were *no significant differences* in the mean completion rates for the various AQF/RATE levels. There is consequently no evidence to support the belief that there is a relationship between course completion rates and AQF/RATE level.

Stream and course completion rates

There are apparently significant differences between the completion rates of courses when grouped by stream (figure 3).

Figure 3: Graph of course completion rates according to stream for a sample of TAFE NSW courses (for 1995 starters)



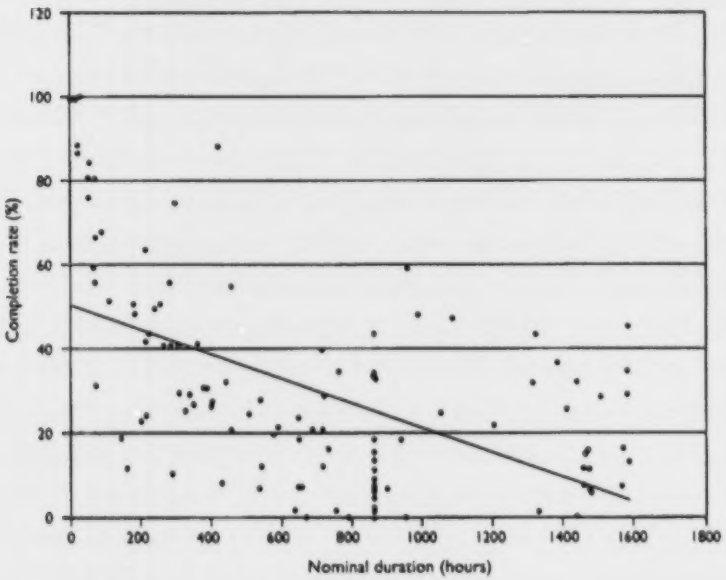
Leaving aside 4200 and 4500 streams which represent the results of single courses, mean completion rates varied from approximately 26%–27% (for streams 2200, 3222 and 3500) to approximately 54%–56% (for streams 2100 and 3211). Despite the significance of these differences, it does not appear that there are any simple relationships between stream and course completion rate.

In this sample of courses, those in stream 2100 (i.e. Basic education and employment skills) and stream 3211 (i.e. Courses which grant partial exemption to recognised trade courses) have relatively high completion rates. 'Education preparation' (2200), 'Complete other skills courses' (3222) and 'Para-professional/Higher Technician courses' (3500) appear to have lower completion rates.

Course duration and course completion rates

Intuitively, it might be expected that longer courses will have lower completion rates. This hypothesis tends to be supported by the data—though any relationship is at best weak. A scattergram of nominal duration against completion rate of students enrolling in courses for the first time in 1995 was produced (figure 4). Each point on the scattergram corresponds to a single course. The scattergram illustrates clearly the weakness of any relationship between course duration and course completion.

Figure 4: Scattergram of course completion rate against nominal duration for selected TAFE NSW courses

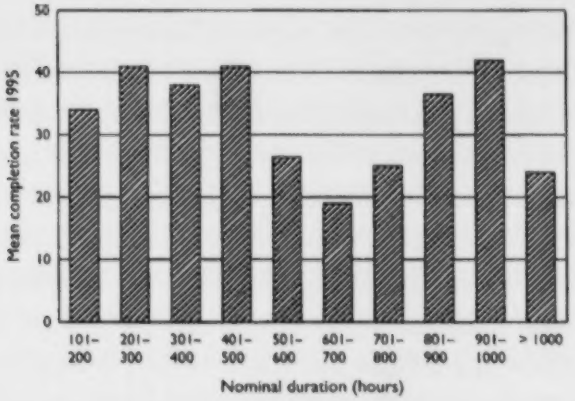


Note: $y = -0.0003x + 0.5046$, $R^2 = 0.3045$

The scattergram above includes 'short courses' of duration less than 100 hours. It is not surprising that these short courses would have high completion rates since they usually comprise only one or maybe two modules—and students enrolling in these courses are likely to have a clear idea of what it is they expect of the modules. If short courses are excluded from consideration, we nevertheless find that the differences in the completion rates for courses greater in length than 100 hours are still statistically significant ($p = 0.013$).

However, the differences are not so simple as saying 'longer courses have lower completion rates' since for both cohorts of students, those entering courses for the first time in 1995 and those entering for the first time in 1996, it appears that courses with nominal durations of 500–800 hours have the lowest completion rates (figure 5).

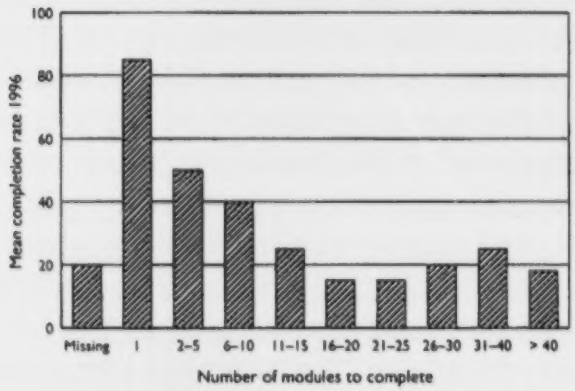
Figure 5: Mean course completion rate against course nominal duration for the 1995 cohort



Number of modules required to complete qualification and course completion rates

Again, intuitively, it might be expected that courses where students have to complete more modules in order to complete a qualification might have lower completion rates. This too is supported by the data from both 1995 and 1996 students (figure 6) with analysis of variance showing a significant difference in completion rates for courses with different numbers of modules ($p = 0.000$).

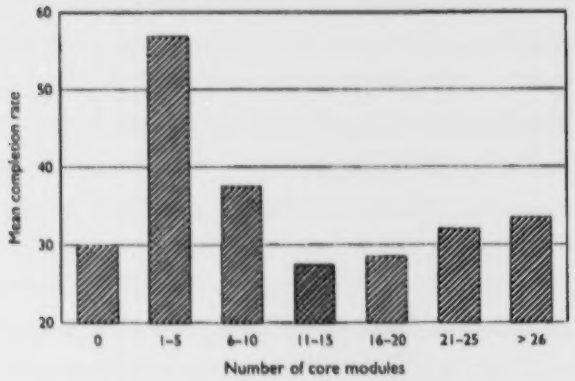
Figure 6: Graph of course completion rate against number of modules required to complete qualification—1996 cohort



Number of core modules in course structure and course completion rates

Completion rates when courses are grouped according to the number of core modules in a course show a similar pattern to the previous result—with completion rates decreasing as the number of core modules increases to a minimum for courses in the range 11–15; then increasing as the number of modules increases (figure 7).

Figure 7: Graph of course completion rate against number of core modules required to complete qualification

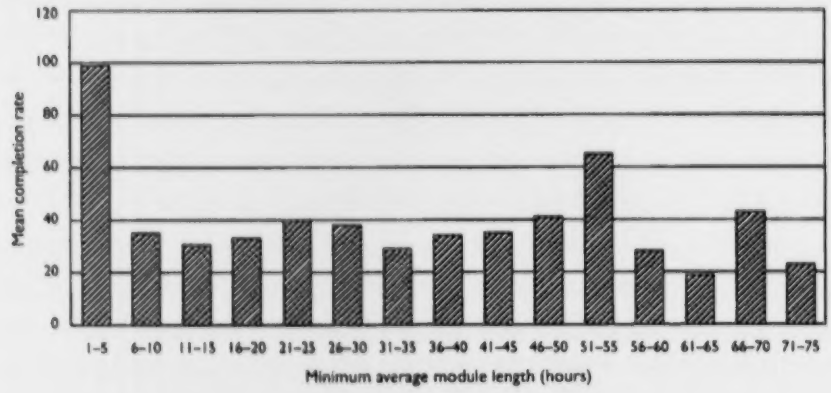


Average module length and course completion rates

A number of studies[51] have explored the relationship between module duration and module completion, with results suggesting that increased module duration leads to lower module completion rates.

In the case of course completion rates, the data from NSW suggest that there is no statistically significant difference between the mean completion rates of courses when they are grouped according to average module duration (figure 8).

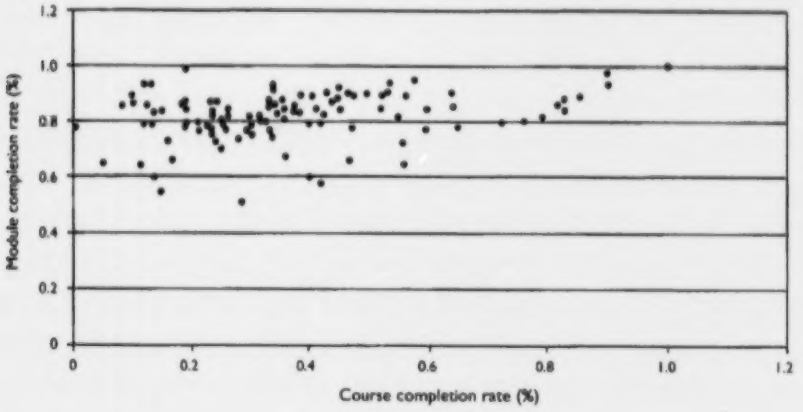
Figure 8: Graph of course completion rate against minimum average module duration



This negative result raises the question of whether there is any relationship between module completion rate and course completion rate.

Figure 9 illustrates module completion rate[52] against course completion rate for the 112 TAFE NSW courses in this study. It can be seen that, for example, a course with a module completion rate of 0.8 (80%) might, at one extreme, have a course completion rate close to zero, at the other a course completion rate close to 80%—90%. In other words, module completion rate is not a good predictor of course completion rate; they appear to be independent measures of 'completion'.

Figure 9: Module completion rate vs. course completion rate for 112 TAFE NSW courses



Graded and ungraded courses and course completion rates

Significant differences were found in the completion rates of graded courses compared to ungraded courses. Of the 37 courses which were graded, the mean completion rate was 31.5%; for the 46 courses which were ungraded the mean completion rate was 44.6%.

The explanation for this significant difference ($p = 0.008$) is not clear. One explanation might be that those courses which are ungraded are more likely to utilise assessment methods which are locally designed and assessed—and that, as a consequence, some of students' uncertainties and concerns about centrally-set assessment are allayed. However, centrally-set assessment, 'exam nerves' and fears relating to assessment are not sufficient to explain the large differences in completion rate since the fact that a course is ungraded does not preclude the possibility of formal, externally-set assessment processes such as exams.

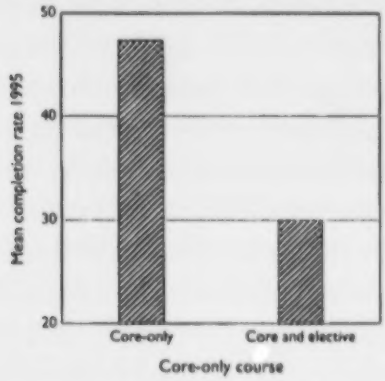
It is difficult to test any of these ideas since, to a large extent, assessment procedures relate to specific modules rather than courses as a whole. Only the most general assessment information is provided in the course part of the curriculum document. Within the context of this project, it was not feasible to examine the particular approaches to assessment within specific modules since this would have required that module descriptors for more than 2100 modules be examined and their assessment approaches coded.

Core-only and core-elective course structures and course completion rates

Course completion rates were found to be greater for courses with a core-only structure compared to those courses with core-elective structures. The mean completion rate for 49 courses with core-only structures was 47.2%; whereas the mean completion rate for 60 courses with core-elective structures was 30.3% (figure 10). Again the differences were statistically highly significant ($p = 0.000$).

This result is quite interesting in that it is not the result expected by many people consulted as part of this project. Intuitively, most people have suggested that courses with core-elective structures should have higher completion rates than those with core-only structures. Expressions such as 'increased flexibility', 'increased choice for students', 'ensuring that students have opportunities to select modules which meet their needs' are often used to justify core-elective structures. This issue is considered in more detail in chapter 6.

Figure 10: Course completion rate and core-only and core-elective structures

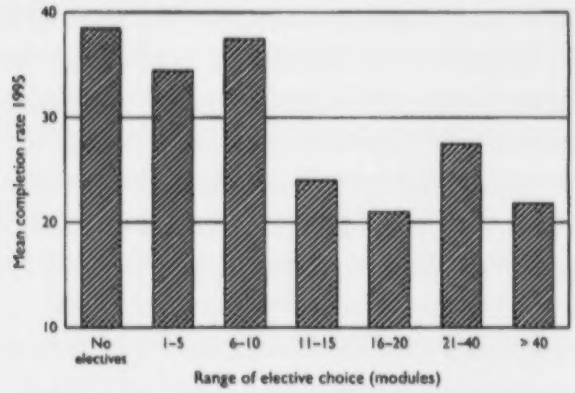


Extent of choice amongst electives and course completion rates

The number of elective modules available to students can vary from two to over 200. The question considered here concerned whether or not the amount of choice provided to students in the range of elective modules had any apparent impact upon completion rates. For the purposes of examining this question, short courses were excluded, that is, Statements of Attainment, College Statements and TAFE Statements, leaving 100 major award courses.

The data, based on the 1995 cohort, suggest that as the number of modules available to students to choose as electives increases, the course completion rate declines (figure 11). This finding is supported by results derived from the 1996 cohort.

Figure 11: Graph of course completion rates for major award courses against extent of elective choice



Again analysis-of-variance shows that these apparent differences in completion rates which depend on the number of electives from which students have to choose are statistically significant (1995; $p = 0.002$).

Comparing NSW courses with the highest and lowest completion rates

One of the research questions for the project asks about factors which contribute to high or low completion rates. Sidestepping the question of what is a high or a low completion rate, courses were sorted according to completion rate and the group of 20 courses with the highest completion rates (i.e. completion rates greater than 50%) was compared with a second group of 20 courses with the lowest completion rates (i.e. completion rates less than 20%). This analysis reverses the previous approach, where known course characteristics were compared with completion rates; in this section we attempt to identify course characteristics that are associated with high and low completion rates. The results are shown in table 8.

The following results can be seen:

- The group of courses with high completion rates had a mean duration significantly less than the group of courses with low completion rates ($p = 0.000$).
- Students were required to complete significantly fewer modules in courses with high completion rates than in those courses with low completion rates ($p = 0.000$).
- Courses with high completion rates had, on average, longer module duration—however this difference is not significant at the 95% level of confidence ($p = 0.089$).
- Students were required to complete significantly fewer core modules in courses with higher completion rates than in those courses with low completion rates ($p = 0.009$).
- Students were required to complete significantly fewer elective modules in courses with high completion rates than in those courses with low completion rates ($p = 0.000$).
- The group of courses with high completion rates provided students with less elective choice than the group of courses with low completion rates ($p = 0.000$).

Table 8: Comparison between NSW courses with high and low completion rates

Comparing courses with highest and lowest completion rates		Nominal duration of the course in hours	No. of modules required for qualification	Average module length	No. of core modules to be completed	Minimum no. of electives to be completed	The range of elective modules from which students choose
Comp. rate	Mean	858.95	24.68	35.675	15.11	9.58	85.25
<20%	N	20	19	20	19	19	20
	Std deviation	483.34	17.39	14.161	13.71	9.94	80.69
Comp. rate	Mean	244.2	5.50	45.720	5.205	0.25	0.89
>50%	N	20	20	20	20	20	19
	Std deviation	309.15	7.88	21.487	7.88	0.91	3.90
Total	**Mean**	**551.57**	**14.85**	**40.697**	**10.05**	**4.79**	**44.15**
	N	**40**	**39**	**40**	**39**	**39**	**39**
	Std deviation	**507.22**	**16.39**	**18.668**	**12.04**	**8.34**	**71.32**
Significance		0.000	0.000	0.089	0.009	0.000	0.000

On the basis that analysis of a single variable by itself cannot tell us much, multiple regression was used to further explore the relationships between the various course structure factors which have been examined. Note, however, that both the researcher and the project steering committee had concerns that undertaking such an analysis does not get around the considerable problems involved in exploring relationships between course structure factors, course completion and the impact of additional external variables.

Simultaneous regression analysis was carried out which included the following factors as independent variables:

- nominal course hours
- the number of modules to be completed to meet course requirements
- average module length
- whether the course was core-only or core-elective
- number of core modules to be completed to meet course requirements
- the minimum number of elective modules to be completed to meet course requirements
- the range of elective modules from which students choose
- whether the course was graded or ungraded

The dependent variable was the completion rate for the 1995 cohort.

The results suggest that the course structure factors which most strongly contribute to the prediction of course completion rates in New South Wales courses are:

- whether or not the course has a core-only or core-elective structure
- the number of core modules to be completed
- whether the course is graded or ungraded

Combined, these and the remaining three variables entered resulted in a model accounting for 38.1% of the variance in completion rates. The model produced by the simultaneous regression analysis produces an equation of the form:

$$Rate = 51.77 - 0.61^{*} NUMCORE - 9.11^{*} COREONLY + 0.957^{*} GRADED + \ldots$$

where NUMCORE is the number of core modules completed as part of the course requirements, COREONLY has only two values—zero for a core-only course, one for a core-elective structure. Likewise GRADED has only two values—zero for a graded course and one for an ungraded course. The equation suggests that there is a 'benchmark' completion rate of 51.77% and that various course structure factors have the impact of reducing or improving course completion rates:

- as the number of core modules increases, the course completion rate decreases
- for core-elective courses, course completion rate decreases
- for ungraded courses, course completion rate increases

Using a step-wise analysis, the number of modules required for the qualification emerged as the single course structure factor which is the best predictor of course completion rates (giving a value of $R^2 = 32.6\%$). The simple equation produced by a step-wise regression analysis is:

$$Rate = 57.69 - 1.134^{*} NUMMOD$$

indicating that as the number of modules increases the completion rate decreases.

Western Australia

The WA Department of Training provided course structure information and corresponding enrolment and course completion information for 64 courses in the case of the 1996 cohort of students and 70 courses in the case of 1997 students first enrolling in VET courses. As in other parts of this study, the investigation of course structures was limited to those factors which could be identified from accredited course documents.

Course completion rates for students who first enrolled in a course in 1996 were calculated for each of the courses according to the formula:

$$\text{Completion rate} = \frac{\text{No. of students who had completed requirements for the qualification}}{\text{No. of students who first enrolled in 1996—No. of students still enrolled}}$$

Likewise completion rates for students who first enrolled in a course in 1997 were calculated.

The notion of 'course completion rates' in the case of Western Australian courses is somewhat misleading. Though all enrolments are course enrolments, the system is geared towards measuring module completion rather than course completion. Students who have completed the requirements for an award are not automatically granted the qualification—students have to apply for an award and may not do so immediately after completing the requirements for a qualification. For these reasons it is likely that the approach used within this project to calculate 'course completion' will result in estimates which may understate the actual eligibility of students for a qualification.

The weighted average completion rate for students entering WA courses for the first time in 1996 was 18.8%. For students entering courses in 1997 the weighted average completion rate was 13.3%. The difference between the completion rates of the two years' cohorts may arise from the fact that there is a delay between the time a student completes the requirements for a qualification and the actual awarding of the qualification. These results cannot be compared with those for NSW since students had had one year less in which to complete their courses (apart from other differences as outlined in the previous paragraph).

Identifying relationships between course structure factors and course completion

Generally it was more difficult interpreting the Western Australian results compared with the New South Wales results. Patterns and trends, if they existed, tended to be less clear and any conclusions more tentative.

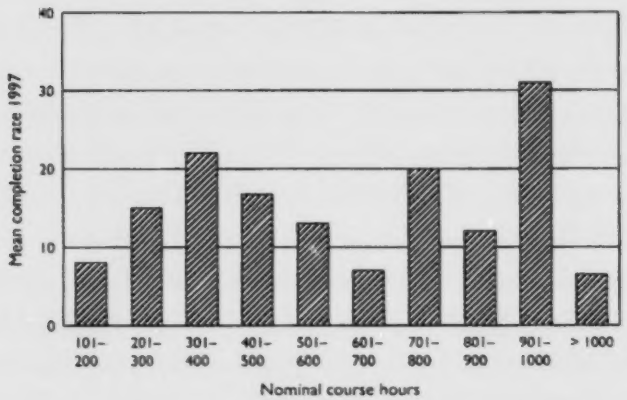
AQF/RATE levels and course completion rates

As in the case of New South Wales courses, there were no significant differences in the mean completion rates when courses were grouped by AQF/RATE levels.

Nominal duration and course completion rates

Whereas in New South Wales longer courses tended to have lower completion rates, in the case of Western Australian courses the findings are more difficult to interpret. Though there are statistically significant differences between courses grouped by duration, at least with the 1997 data ($p = 0.029$), there is no consistent pattern or trend in the result.

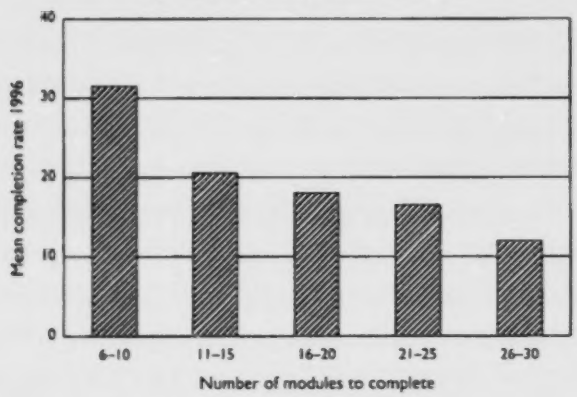
Figure 12: 1997 cohort course completion rates according to nominal course hours for a sample of WA courses



Course completion and number of modules students are required to complete

As the number of modules in the course increases, the course completion rate tends to decrease. Figure 13 shows the result for the 1996 cohort. A similar result was obtained for the 1997 cohort. The differences in mean completion rates when courses were grouped according to the number of modules students were required to complete were statistically significant ($p = 0.044$ and $p = 0.001$).

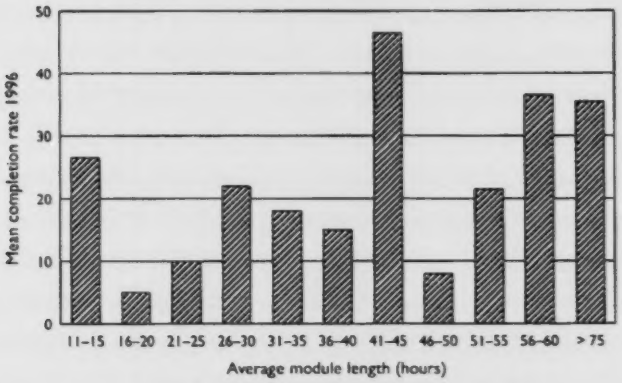
Figure 13: Graph of 1996 cohort course completion rates according to number of modules to be completed for a sample of WA courses



Average module duration and course completion rates

For both the 1996 and 1997 cohorts, there were statistically significant differences between completion rates when courses were grouped according to average module duration. However the graph below (for 1996 cohort) demonstrates how difficult it is to see any clear pattern in this result. (The graph is similar for the 1997 cohort.)

Figure 14: Graph of 1996 cohort course completion rates according to minimum average module duration for a sample of WA courses



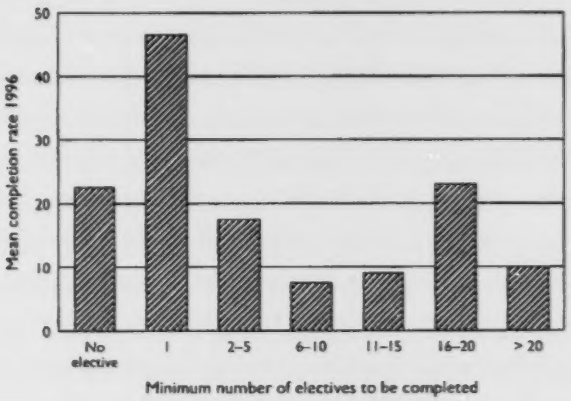
Core-only and core-elective structure

The data for both years suggests that course completion rates are higher for those courses with core-elective structures, though only for the 1997 cohort is this result statistically significant with p = 0.000.

Number of electives to be completed

As the number of elective modules to be completed in order to meet the requirements of the course increases, course completion rate tends to decrease (p = 0.010). However the graph for the 1997 cohort differs somewhat in pattern, with the 'no electives' completion rate being by far the highest. Once again, this will relate to the lesser amount of time available to the 1997 cohort.

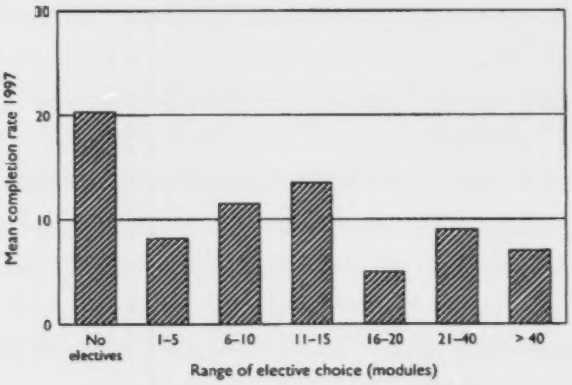
Figure 15: Graph of course completion rates (1996 cohort) for a sample of WA courses grouped by number of elective modules to be completed



Range of elective choice and completion rate

As the range of electives from which students have to select their electives increases, course completion rates tend to decrease. This result is consistent across data from both years and is statistically significant ($p = 0.040$ and $p = 0.003$).

Figure 16: Graph of course completion rates against range of elective choice for a sample of WA courses offered in 1997



Comparing WA courses with the highest and lowest completion rates

As with the New South Wales courses, the 20 courses with the highest completion rates, were compared with the 20 courses with the lowest completion rates, to examine whether there were any course structure factors which appeared to be associated with higher completion rates.

Results are summarised in table 9. Significant differences between the two groups of courses include the following:

- Courses with high completion rates on average require students to complete fewer modules (1996; $p = 0.001$).
- Courses with high completion rates on average have modules with longer average module duration (1996; $p = 0.026$).
- Courses with high completion rates also tend to have a smaller range of elective modules from which students are to choose—this result is not statistically significant ($p = 0.071$) for the 1996 cohort; but is statistically significant ($p = 0.040$) for the 1997 cohort.
- Nominal duration of the course does not appear to be a significant factor in the different completion rates of the two groups (1996; $p = 0.200$).

Table 9: Comparison between WA courses with high and low completion rates

Highest and lowest completion rates		Nominal duration of the course in hours	Minimum no. of modules required for qualification	Minimum average module length	No. of core modules to be completed	Minimum no. of electives to be completed	The range of elective modules from which students choose
1996—courses	Mean	759.45	24.30	31.275	17.90	6.40	32.55
with lowest	N	19	20	20	20	20	20
comp. rate	Std deviation	322.41	9.22	14.608	10.83	8.57	58.60
1996—courses	Mean	630.50	14.60	51.440	11.85	2.75	7.35
with highest	N	20	20	20	20	20	20
comp. rate	Std deviation	295.26	7.56	36.179	6.53	6.02	15.49
Total	**Mean**	**693.32**	**19.45**	**41.358**	**14.88**	**4.57**	**19.95**
	N	**39**	**40**	**40**	**40**	**40**	**40**
	Std deviation	**311.59**	**9.67**	**29.084**	**9.35**	**7.54**	**44.19**
Significance		0.200	0.001	0.0026	0.039	0.127	0.071

Simultaneous regression analysis was carried out which included the following factors as independent variables:

- nominal course hours
- the number of modules to be completed to meet course requirements
- average module length
- whether the course was core-only or core-elective
- number of core modules to be completed to meet course requirements
- the minimum number of elective modules to be completed to meet course requirements
- the proportion of the course hours which were elective
- the range of elective modules from which students choose
- the proportion of the total elective hours available which must be completed by students to meet course requirements

The dependent variable was the completion rate for the 1996 cohort.

The simultaneous regression analysis suggested that in the case of the Western Australian data, the course structure factors which most strongly contribute to the prediction of course completion rates are:

- whether the course is a core-elective or core-only structure
- the proportion of the available elective hours which are to be completed by students
- the number of electives to be completed
- the number of core modules to be completed

When a step-wise analysis is done, average module length is the course structure factor which emerges as the best predictor of course completion rates (giving a value of $R^2 = 17.0\%$, $p = 0.001$). The step-wise model which is produced is of the form:

$$Rate = 9.173 + 0.248^{*} AVMODLEN$$

Again, this relationship supports the earlier suggestion that, in the case of Western Australian courses, longer module durations actually improve course completion.

Victoria

Data were provided relating to approximately 364 000 'derived course enrolments'. Of these, 172 000 were for students first enrolling in VET courses in 1995; and 192 000 were for students first enrolling in VET courses in 1996.

The data listed derived enrolments in over 360 courses, organised by institute. The file relating to students who first enrolled in 1995 provided information about the number of students who first enrolled in each course in 1995, as well as data about the numbers of students who continued in the course and who completed the requirements for the qualification in subsequent years.

A number of problems arose for the project in determining what parts of the data provided were sufficiently accurate to use in the analysis. Some of the anomalies which existed in the data included the following:

- Considerable variation existed across institutes with 'average completion rates' for specific courses varying from 0.00% to 49.8%. It is possible that rather than being a representation of actual completion rates, the variation across institutes is more likely to reflect differences in institute reporting systems and processes.
- For a small number of courses, the number of students reported as completing the requirements for a qualification exceeded the number of students enrolled in the course.
- A number of providers had course completions which were unexpectedly and consistently high for students first enrolling in 1996—relative to other providers in the system and other providers in other States.
- There appeared to be significant under-reporting or nil reporting of student completions by a number of providers.

Despite these concerns, an estimate of the 'course completion' rate was calculated using the following formula:

$$\text{Completion rate} = \frac{\text{No. of students who had completed requirements for the qualification by Dec 1998}}{\text{No. of students who first enrolled in 1995}}$$

The number of students continuing courses in 1998 in which they first enrolled in 1995 was, in most cases, very small. Consequently, the effect of students who might be continuing courses in 1999 was ignored in determining course completion.

Average course completion rates were determined—across institutes and by course. Based on the information provided, the weighted average completion rate for students entering Victorian courses for the first time in 1995 was 18.9%. For students entering courses in 1996 the weighted average completion rate was 14.6%.

Information about the courses for which information was available

A number of factors made it difficult to access information relating to the structure of courses offered in 1995. Responsibility for curriculum information and course maintenance in Victoria is decentralised. In addition, historical course documentation is not archived in an electronic form.

Course structure information relating to only 44 of the courses for which completion rates were calculated was obtained.

As with Western Australian and New South Wales data, the investigation of course structures was limited to those factors which could be identified from available course documents. In addition, two further variables were calculated and used in the analysis.

These were:

- the proportion of the nominal course hours which are 'core'
- the proportion of elective hours available which students are able to select[83]

Identifying relationships between course structure factors and course completion

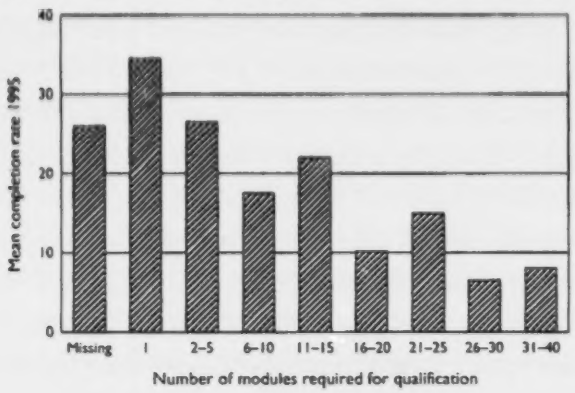
Only one statistically significant relationship was able to be detected in the Victorian results—this related to core-only and core-elective structures. The data for the 1995 cohort suggested that core-only courses have higher completion rates ($p = 0.043$), a result which was also seen in the Western Australian and New South Wales results.

Table 10: Course completion and core-only or core-elective structure for a sample of Victorian courses

COMPRT95		Report	
Core-only or core-elective structure	*Mean (%)*	*N*	*Standard deviation (%)*
Core-only	25.0464	11	25.0830
Core-elective	12.6633	30	12.6861
Total	15.9856	41	17.4592

A number of other results compatible with those found in the New South Wales and the Western Australian data were found—but these were not statistically significant for the Victorian data. One example relates to the number of modules which students were required to complete in order to meet the requirements of the course. The NSW and WA data suggested that the more modules in a course, the lower the completion rate. The following graph based on the Victorian results suggests a similar result.

Figure 17: Course completion and number of modules for a sample of Victorian courses



Comparing Victorian courses with the highest and lowest completion rates

As with New South Wales and Western Australian courses, Victorian courses were sorted according to course completion rate. A group of 15 courses with the highest completion

rates was compared with another group of 15 with the lowest completion rates. The results are shown in table 11.

Table 11: Comparison between Victorian courses with high and low completion rates

Highest and lowest		HOURS	NO-MODULE	AVE-MODULE	NUM-CORE	PCT-CORE	NUM-ELEC	PCT-ELEC	ELEC-RANG	ELEC-PROP
Lowest completion rates	Mean	941.07	22.40	42.8480	18.13	0.8018	4.27	0.1982	23.73	0.2663
	N	15	15	15	15	11	15	11	15	8
	Std dev.	603.70	14.07	19.9210	15.17	0.1755	3.17	0.1755	49.32	0.1061
Highest completion rates	Mean	503.80	15.60	33.5787	14.07	0.8920	1.53	0.1080	3.07	0.5650
	N	15	15	15	15	10	15	10	15	2
	Std dev.	437.18	15.30	17.0712	15.24	0.1689	3.38	0.1689	5.91	9.192
Total	**Mean**	**722.43**	**19.00**	**38.2133**	**16.10**	**0.8448**	**2.90**	**0.1552**	**13.40**	**0.3260**
	N	**30**	**30**	**30**	**30**	**21**	**30**	**21**	**30**	**10**
	Std dev.	**563.61**	**14.85**	**18.8279**	**15.08**	**0.1743**	**3.51**	**0.1743**	**36.08**	**0.1599**
Significance		0.031	0.216	0.132	0.470	0.246	0.030	0.246	0.118	0.007

Comparing courses with higher completion rates with courses with lower completion rates, the following results can be seen:

- The group of courses with high completion rates had a mean duration significantly less than the group of courses with low completion rates ($p = 0.031$)
- Students were required to complete significantly fewer elective modules in courses with high completion rates than in those courses with low completion rates ($p = 0.030$)
- In those courses with high completion rates, students were required to complete a greater proportion of the total elective hours available as part of the course structure ($p = 0.007$)

Simultaneous regression analysis was carried out with the following factors as independent variables:

- nominal course hours
- the number of modules to be completed to meet course requirements
- average module length
- number of core modules to be completed to meet course requirements
- the proportion of the course hours which were core
- the minimum number of elective modules to be completed to meet course requirements
- the proportion of the course hours which were elective
- the range of elective modules from which students choose
- the proportion of the total elective hours available which must be completed by students to meet course requirements

The dependent variable was the completion rate for the 1995 cohort (as calculated earlier).

Simultaneous regression analysis suggests that the three course structure factors which most strongly contribute to the prediction of course completion rates in Victorian courses are:

- the proportion of the available elective hours which are to be completed by students
- the number of electives to be completed
- the range of electives from which students have to complete their courses

The proportion of the available elective hours which are to be completed by students emerges as the course structure factor which is the best predictor of course completion rates (giving a value of $R^2 = 48.8\%$).

The equation produced by a step-wise regression analysis is of the form:

$$Rate = -19.24 + 93.5^{*} ELECPROP$$

where ELECPROP is the proportion of available elective hours which must be completed by students (i.e. the number of elective hours to be completed / the number of elective hours available in the course structure).

As students are required to complete a greater proportion of the electives included in the course structure the value of ELECPROP will tend towards one—and the course completion rate will increase. On the other hand, as the proportion of elective hours undertaken by students decreases, usually as a result of increasing the range of electives available from which students choose, the value of ELECPROP tends towards zero—and the course completion rate decreases. Again we can see that this relationship supports the idea that core-only course structures have higher completion rates. Also that as the range of electives increases, course completion rates decrease.

Which courses have the highest and lowest completion rates?

The question arises of what other differences, aside from courses structure differences, might exist between courses with higher completion rates and those with lower completion rates.

The lists which follow include the courses with highest and lowest completion rates from each State. The courses have been amalgamated into two lists which do not identify the State to which the courses belong. Short courses have been excluded.

The courses with the highest completion rates are shown below:

Advanced Certificate in Estate Agency	AQF C4
Advanced Certificate in Horticulture	AQF C4
Advanced Certificate in Hospitality	AQF C4
Advanced Certificate in Information	AQF C4
Advanced Certificate in Kitchen Management	AQF C4
Advanced Certificate in Professional	AQF C4
Advanced Certificate in Residential	AQF C4
Apprenticeship Certificate in Cookery	AQF C3
Associate Diploma of Arts (Studio Te)	AQF D/ASS DIP
Associate Diploma of Business (Inter)	AQF D/ASS DIP
Associate Diploma of Business (Marketing)	AQF D/ASS DIP
Associate Diploma of Business (Micro)	AQF D/ASS DIP
Auto Electrical	CERT
Auto Light Vehicle Mechanics	CERT III
Building Supervision	ADV CERT
Business (Real Estate)	ADV CERT
C & J Introductory Skills	AQF C1
Cabinet Making	CERT
Carpentry & Joinery	AQF C2
Certificate II in Information Technology	AQF C2
Certificate III in Community Studies	AQF C3
Certificate in Child Care (Home Based)	AQF C3
Certificate in Commercial Cookery	AQF C2
Certificate in Home & Community Care	AQF C3
Certificate in Patient Services	AQF C2
Child Studies	ASS DIP
Children's Services (0–5 YEARS)	CERT II
Children's Services (Teacher Assistant)	CERT III
Clerical & Administration Skills	CST CERT II
Commercial Cookery (ASF 3)	CERT III
Diploma of Community Services (Child Care)	AQF D/ASS DIP
English for Vocational Purposes	AQF C3
Fabrication Engineering	CERT
Farming Trades Apprenticeship: Beef	AQF C3
Fashion Headwear	CERT
Graphic Design	ASS DIP
Green Keeping	CERT
Hairdressing	CERT III
Health & Fitness	CERT IV
Health Science (Enrolled Nursing)	ASS DIP
Human Services (Disability)	CERT IV
Human Services (Social Welfare)	CERT IV
Human Services	CERT III
Human Services	DIPLOMA
Interpreting	AQF D
Library Practice	ASS DIP
Marketing	CERT III
Massage Therapy	ASS DIP
Mechanical Engineering	ADV CERT
Nursing (Enrolled Nursing)	ADV CERT
Policing	DIPLOMA
Printing Machining	CERT III
Retailing	ADV CERT
Trade Studies Carpentry & Joinery	CERT
Trade Studies Electrical Mechanic	CERT
Trade Studies Engineering Tradesperson (Fabrication)	CERT
Trade Studies Engineering Tradesperson (Mechanical)	CERT
Trade Studies Painting & Decorating	CERT
Trade Studies Plumbing & Gasfitting	CERT
Working with older people	CERT

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Courses with the lowest completion rates follow:

Advanced Certificate in Accounting	AQF C4
Advanced Certificate in Estate Agenc	AQF C4
Advanced Certificate in Farming	AQF C4
Advanced Certificate in Horticulture	AQF C4
Advanced Certificate in Information	AQF C4
Advanced Certificate in Management	AQF C4
Advanced Certificate in Sales Management	AQF C4
Advertising	AQF D
Apparel (Small Business)	CERT III
Apprenticeship Certificate in Cookery	AQF C3
Associate Diploma of Applied Science	AQF D/ASS DIP
Associate Diploma of Business (Accountancy)	AQF D/ASS DIP
Associate Diploma of Business (Banking)	AQF D/ASS DIP
Associate Diploma of Business (Office Administration)	AQF D/ASS DIP
Associate Diploma of Business in Hospitality	AQF D/ASS DIP
Associate Diploma of Social Science	AQF D/ASS DIP
Associate Diploma of Visual Arts	AQF D/ASS DIP
Building Design and Drafting	DIPLOMA
Building	CERT IV
Business (Marketing Management)	AQF D
Business (Office Administration)	DIPLOMA
Business Office Skills	CERT III
Business Studies	CERT III
Business Studies	DIPLOMA
Certificate IV in Information Technology	AQF C4
Civil Engineering	ASS DIP
Elec Engineering	ADV CERT
Elec Technology	ASS DIP
Electronic Studies	CERT II
Engineering (Electronics)	CERT IV
Engineering Production Level 1	CERT
Engineering Production Level 2	CERT
Engineering Production Level 3	CERT
Engineering	ASS DIP
Food Processing	CERT
Forest Industry Plant Operator	AQF C2
General Education for Adults (Foundation)	CERT I
General Education	CERT II
Health and Building	ASS DIP
Horticultural Practice (Amenity)	CERT III
Information Technology (Analyst/Programming)	AQF D
Information Technology	CERT II
Information Technology	CERT III
Information Technology	CERT IV
IT (Business Systems)	AQF D
Japanese	CERT III
Management	CERT IV
Management	DIPLOMA
Mechanical Technology	ASS DIP
Nautical Fishing	ASS DIP
Public Relations	AQF D
Rural Operations	CERT II
Rural Practice	AQF C3
Small Business Management	CERT III
Structural Engineering	AQF D
Trade Studies Engineering Tradesperson (Electrical)	CERT

In considering these two groups of courses it is necessary to bear in mind a number of problems inherent in the data. Firstly, the initial samples of courses provided by each of the States were non-random. For example, in the case of Victoria, few courses were included in the sample from the engineering/metals/manufacturing areas. On the other hand, courses from the business studies area were well represented in the sample. Courses at AQF 3 and lower were under-represented in the sample compared to higher-level courses.

Another problem is that the lists do not necessarily include the courses across the sample as a whole with the highest and lowest completion rates. Each of the lists includes 20 courses from each of New South Wales and Western Australia and 15 from Victoria. Since it is not possible to directly compare courses across States, courses from one State may have been excluded which actually had higher completion rates than courses from other States.

Further, the analytical approach here is not very rigorous and it is likely that different individuals surveying the two lists will see different relationships. This problem aside, it does appear that there are noticeable differences between the two lists.

The group of courses with higher completion rates appears to include:

- more courses where enrolment is (usually) combined with paid employment
- more courses where the course is regarded as one of the normal requirements for entry to the occupation
- more trade certificates and apprenticeships
- more courses oriented towards providing personal and community services

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In a number of courses in the first list, such as nursing and policing, training is combined with employment. Continuing employment is dependent upon successful completion of the course providing a strong reason for students to want to complete their courses successfully. In the case of nursing in New South Wales, for example, the course was funded by the State Health Department. Students were employed by the Health Department for a period of 12 months and attended TAFE as part of their employment. The course provided for on-the-job and off-the-job training and allowed for articulation into university Bachelor of Nursing courses with a one-year credit.

A number of the courses amongst those with higher completion rates are recognised as providing the normal minimum requirement for entry to work in areas such as interpreting, child studies and children's services. To become an interpreter, for example, there is a requirement that a person be accredited by the national organisation, NATI. Completion of the Diploma in Interpreting provides students with automatic accreditation.

The group of courses with higher completion rates includes as well a relatively high proportion of trade certificates and apprenticeships in which the student is indentured to an employer. These include greenkeeping, cabinet making, printing and machining, auto-electrical, plumbing and gasfitting, painting and decorating, and hairdressing. Most of these courses, at least during the period with which this study is concerned, were 'traditionally structured' with an emphasis on a core group of modules, with a very small elective component if any.

Also amongst the group of courses with higher completion rates were a number of courses in areas such as child studies, patient services, home and community care, social welfare and disability services. One possible explanation may be that students enrolling and participating in these courses have particularly high levels of motivation; or it may be that the quality of teaching and/or delivery is qualitatively different with these courses from other courses.

Compared to courses with higher completion rates, the list of courses with lower completion rates appears to include:

- more courses where completion is not a requirement for employment in an industry
- more courses with large banks of modules from which students choose

This list includes proportionately more courses in industry areas such as business studies, information technology and metals/engineering. One possible explanation is that students are employed prior to entry to the courses or find employment prior to completing their courses. Having found employment there is a higher likelihood that students will not complete their courses. It is interesting too that amongst the courses with lowest completion rates are a considerable number in which students select their modules from a large bank of modules. Courses in metals/engineering, electrical, and information technology, particularly higher-level courses, are amongst this group.

Summary of relationships between course completion rates and course structure

This chapter has presented a number of tentative relationships between course structure and course completion. Table 12 summarises the findings. To summarise:

- Relationships do exist between course structure factors and course completion rates. However these are all fairly weak.
- Very few of these relationships can be found consistently in courses across the three States in the study. For example, in relation to course duration and average module duration, relationships which are significant in one State are not apparent in other States.

Whether these relationships actually exist or are artefacts of the particular data used is not clear.

- The only factor which emerges as a significant factor in each of the three States is that of core-only or core-elective structure. The discussion in chapter 6 deals with this finding in more detail and raises the possibility that students provided with greater choice in core-elective courses are more inclined to undertake those parts of a course they want or need to take.
- Other factors of interest include range of elective choice and 'elective proportion'. In the case of New South Wales courses, as the number of elective modules increases, course completion rate tends to decline. In Western Australian courses, though the result is not significant, the data suggest a similar relationship. In Victoria, where the alternative measure of elective proportion was used, this factor emerged as the key predictor in the regression analysis. This result suggests that as the proportion of the available elective hours which have to be completed by a student increases (i.e. elective choice effectively decreases), that course completion rate increases. Each of these results then points to the possibility that as the range of electives increases, course completion rate declines. Again this possibility is taken up in the discussion in chapter 6.

Table 12: Summary of relationships between course structure factors and course completion rates

AQF/RATE levels	NSW	WA	Vic
Stream	** Courses within particular streams do have higher completion rates	NS	NS
Nominal course duration	** Longer courses tend to have lower completion rates (p = 0.013)	NS	** Trend—but not significant Comparing highest and lowest—significant difference (p = 0.031)
Number of modules	** Comparing highest and lowest—significant difference (p = 0.000) with students required to do fewer modules completing at a higher rate REGRESSION—KEY FACTOR	** Comparing highest and lowest—significant difference (p = 0.001) with students required to do fewer modules completing at a higher rate	NS Trend—but not significant
Average module duration	NS	** Comparing highest and lowest—significant difference (p = 0.026) with courses with longer average module duration having higher completion rates REGRESSION—KEY FACTOR	NS p = 0.067 Not possible to determine trend
Number of core modules	** Completion rates tend to decrease as the number of core modules increases (p = 0.000)	** Links with number of modules above. Fewer core modules ⇒ higher completion rates (p = 0.039)	NS Trend to decrease as number of core modules increases

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Table 12: Summary of relationships between course structure factors and course completion rates (cont.)

AQF/RATE levels	NSW	WA	Vic
Number of electives	NS	** Comparing highest and lowest—significant difference (1997 p = 0.004) with students doing lower number of electives completing at higher rate	** Comparing highest and lowest—significant difference (p = 0.030) with students doing lower number of electives completing at higher rate
Core-only or core-elective structure	** Course completion rates were found to be greater for courses with a core-only structure compared to those courses with core-elective structures (p = 0.000)	** Significant difference between core-only and core-elective courses with core-only courses having higher completion rates (1997 p = 0.000)	** Significant difference (p = 0.043) Core-only ➲ higher completion rates
Range of elective choice	** As the number of modules available to students to choose as electives increases, the course completion rate tends to decline (p = 0.002)	NS Considerable difference between high and low groups but not significant with p = 0.071	NS
Elective proportion	NS	NS	** Significant difference (p = 0.000). Less elective choice ➲ higher course completion REGRESSION—KEY FACTOR
Graded and ungraded courses	** Significant differences were found between the completion rates of graded courses compared to ungraded courses with ungraded courses having higher completion rates (p = 0.008)	NS	NS

Note: In the table above, two asterisks indicate there was a relationship which was significant at the 95% level of confidence. NS indicates that no significant relationship could be found. REGRESSION—KEY FACTOR indicates that this factor was the one which emerged as being the best predictor of course completions in the relevant State.

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4 Student phone interviews

Introduction

The Steering Committee for this project recognised that while course factors were to be investigated to establish any apparent causal relation with course completion, they were likely at best to play a minor role in influencing the outcome of a course enrolment.

Much of the existing research, and anecdotal information, suggests that it is factors other than course structure that have the greatest impact upon course completion. These factors, outlined earlier in chapter 2, include a range of environmental, personal and delivery factors which have largely been 'avoided' in the mainly single variable analysis of the impact of course structure factors in the previous chapter.

The project's steering committee was keen, at a minimum, to obtain some information about students' reasons for leaving courses prior to completion and in particular to determine whether these were at all related to course structure factors.

This part of the work involved interviewing previous students of VET courses in the three States about the reasons they left their courses prior to completing.

Phone interviews were conducted with 762 past students of VET courses in the three States involved in the study: New South Wales, Victoria and Western Australia.

The interview schedule (appendix A) comprised four sections:

Section A: This section dealt with a student's main reason for enrolling in the course; whether or not they intended, when they enrolled, to complete the whole course; the importance they attached to the qualification; and whether they achieved their reason for enrolling in the course.

Section B: This section asked about delivery mode; the number of modules students had completed; and whether they completed the qualification. If students said they had completed the qualification,[54] the next group of questions, section C, was omitted.

Section C: This section asked students to estimate, on a four-point scale, the extent to which each of 58 given factors influenced their decision to leave the course before completing it.

Section D: This section consisted of four questions about a student's employment situation during the course; whether they changed their enrolment and whether they have undertaken further VET study since leaving their course.

The sample

New South Wales

Contact names and addresses were made available by Student Administrative Services for 18 297 students who first enrolled in nine TAFE NSW courses in either 1995 or 1996 who left prior to completing their courses. The nine courses were as follows:

- Advanced Diploma in Accounting
- Associate Diploma in Architectural Drafting
- Associate Diploma in Building
- Associate Diploma in Child Studies
- Certificate II in Hospitality Operations
- Certificate III in Information Technology
- Diploma in Information Technology (Programmer/Analyst)
- Associate Diploma in Library Practice
- Associate Diploma in Mechanical Technology

Within a course, phone numbers of past students contacted were randomly selected. No effort was made to weight the sample according to institute attended, gender, language spoken at home, employment status at time of enrolment or any other personal factor. Nor, given the diversity in course enrolments, was any attempt made to weight the numbers of respondents according to cohort size in each of the courses—since this would have meant relatively large samples in some courses and very small samples in other courses. Instead, the interviews were spread across the nine courses so that roughly similar sample sizes were achieved for each of the courses.

Of the contacts made:

- 301 past students were contacted and available to be interviewed.
- 165 past students were contacted but refused to be interviewed.
- 103 contacts were made with the home/work of past students who were unavailable to be interviewed because they were not at home, on holidays, etc.
- 698 past students had changed phone numbers, moved residence, changed jobs and could not be contacted.

No effort was made to analyse the refusals, nor to consider any biases that refusals or changed addresses/phones numbers introduced into the data.

Victoria

A sample of six courses was selected on the basis that enrolments in these courses were sufficient to provide a list of contact names and addresses for the interviews. The six courses were:

- Certificate in Office Administration
- Certificate in Engineering (Mechanical Engineering)
- Associate Diploma of Business (Marketing)
- Advanced Certificate in Information Technology
- Associate Diploma of Business (Accounting)
- Apprenticeship Certificate in Cookery

Four metropolitan institutes were invited to provide the names and contact details of students who first enrolled in these courses in 1995. In total, the contact details of 3082 students were made available.

Of the contacts made with people whose phone numbers were in the lists provided:

- 247 past students were available to be interviewed.
- 196 past students were contacted but refused to be interviewed.
- 57 contacts were made with the home/work of past students who were unavailable to be interviewed because they were not at home, on holidays, etc.

- 894 past students had changed phone numbers, moved residence, changed jobs and could not be contacted.

Western Australia

A sample of eight courses was identified by Western Australian personnel on the basis that these courses were most similar to those in the New South Wales sample. The eight courses were:

- Certificate III in Engineering (Automotive)
- Diploma in Children's Services
- Diploma in Health Science (Massage)
- Diploma in Building Design & Drafting
- Diploma in Building
- Advanced Diploma of Accounting
- Certificate III in Information Technology
- Diploma in Information Technology

Each of the 28 colleges in the Western Australian system was invited to participate in the project and to provide names and contact details of students who enrolled in these courses for the first time in 1996. In the end, information relating to 5838 students enrolled at five colleges was made available to the project.

Of the contacts made with people whose phone numbers were in the lists provided:

- 215 past students were available to be interviewed.
- 28 past students were contacted but refused to be interviewed.
- 34 contacts were made with the home/work of past students who were unavailable to be interviewed because they were not at home, on holidays, etc.
- 297 past students had changed phone numbers, moved residence, changed jobs and could not be contacted.

In summary, the approaches to students for interview led to the following outcomes:

Table 13: Summary of results of approaches for phone interviews

Response	NSW		Vic		WA		All	
	No.	%	No.	%	No.	%	No.	%
Available	301	23.76	247	17.72	215	37.46	763	23.59
Refused	165	13.02	196	14.06	28	4.88	389	12.02
Unavailable	103	8.13	57	4.09	34	5.92	194	6.00
Unable to contact	698	55.09	894	64.13	297	51.74	1889	58.39
Total	1267	100.00	1394	100.00	574	100.00	3235	100.00

A number of methodological concerns

Initially it was intended that stratified random sampling techniques would be used to select the students for the interviews. But given the various processes and methods required to select courses and colleges and to obtain the student contact details in each of the States, and the significant State-to-State variations in contact detail accuracy implied by table 13 above, there was no practical prospect of obtaining the desired randomness in the sampling.

In addition, it was always recognised that there would be methodological problems arising from the length of time since students had originally enrolled in their courses. It was

expected that many students, particularly those enrolled in some courses, would have shifted addresses and changed phone numbers, with the consequent problems of sampling bias, as table 13 illustrates.

The samples from the three States were different in a number of substantial ways:

- In both Victoria and Western Australia, colleges volunteered to be involved in the research and provided the data which was available. No effort was made to follow up those colleges that chose for one reason or another not to participate.
- In most cases, the numbers of contact names and addresses provided did not match the figures for enrolments in the respective years. No effort was made to ascertain the reasons for these discrepancies.
- The courses selected in each State were different.
- Only with New South Wales students was it possible to identify beforehand students who had not completed their courses and then to use this as a basis for selecting students to be involved in the interviews. In the case of Victorian and Western Australian students, it was not possible to ascertain which students had or had not completed their courses. As a consequence, it was necessary to accept the students' response to the question 'Did you complete the qualification?' since there was no other basis for making a decision about this. Where students replied that they had completed the qualification, they did not take part in section C of the interview which examined students' reasons for leaving courses prior to completing their courses.

Within the context of this 'exploratory' project it was not possible to control for all of these potential methodological problems.

A private telephone interviewing company was contracted to undertake the interviews which lasted on average about 13 minutes each.

Table 14: Numbers of students interviewed by phone in each course

	Course	Frequency	Percentage	Valid %	Cumulative %
Valid	Cert III Engineering (Automotive)	41	5.4	5.4	5.4
	Cert Office Administration	60	7.9	7.9	13.3
	Cert Engineering (Mechanical)	60	7.9	7.9	21.2
	Ass Dip Library Practice	22	2.9	2.9	24.0
	Ass Dip Business (Marketing)	44	5.8	5.8	29.3
	Cert III IT	33	4.3	4.3	34.2
	Dip IT (A–P)	22	2.9	2.9	37.1
	Adv Cert IT	16	2.1	2.1	39.2
	Ass Dip Building	38	5.0	5.0	44.2
	Ass Dip Architectural Drafting	24	3.1	3.2	47.3
	Ass Dip Business (Accounting)	55	7.2	7.2	54.5
	Cert II Hosp Ops	43	5.6	5.7	60.2
	Apprenticeship Cert in Cookery	12	1.6	1.6	61.8
	Dip Childrens Services	23	3.0	3.0	64.8
	Dip Health Science (Massage)	12	1.6	1.6	66.4
	Dip Building Design and Drafting	12	1.6	1.6	67.9
	Dip Building	13	1.7	1.7	69.6
	Ass Dip Mechanical Technology	27	3.5	3.5	73.2
	AD Accounting	54	7.1	7.1	80.3
	AD Accounting	58	7.6	7.6	87.9
	Ass Dip Child Studies	38	5.0	5.0	92.9
	Cert III IT	40	5.2	5.3	98.2
	Dip IT	14	1.8	1.8	100.0
	Total	**761**	**99.9**	**100.0**	
Missing	System	1	0.1		
Total		762	100.0		

As mentioned previously, no attempt was made to construct the sample according to student personal factors, course or institute. The numbers of students interviewed in each of the courses is shown in table 14. The numbers of students interviewed from each of the colleges/institutes which students attended is shown in table 15.

Table 15: Numbers of students interviewed from each college/institute

	Course	Frequency	Percentage	Valid %	Cumulative %
Valid	Aelg	2	0.3	0.3	0.3
	Albury	1	0.1	0.1	0.4
	Aons	1	0.1	0.1	0.5
	Armidale	5	0.7	0.7	1.2
	Awht	8	1.0	1.0	2.2
	Bankstown	16	2.1	2.1	4.3
	Baulkham Hill	1	0.1	0.1	4.5
	Belmont	2	0.3	0.3	4.7
	Blacktown	3	0.4	0.4	5.0
	Blue Mountain	6	0.8	0.8	5.9
	Bonbeach	5	0.7	0.7	6.6
	Campbelltown	3	0.4	0.4	7.0
	Cessnock	3	0.4	0.4	7.3
	Cmc	111	14.6	14.6	21.9
	Coffs Harbour ED	1	0.1	0.1	22.0
	Crows Nest	5	0.7	0.7	22.7
	Dandenong	4	0.5	0.5	23.2
	Dubbo	1	0.1	0.1	23.4
	East Sydney	2	0.3	0.3	23.6
	Elg	14	1.8	1.8	25.5
	Frankston	54	7.1	7.1	32.5
	Gosford	1	0.1	0.1	32.7
	Granville	17	2.2	2.2	34.9
	Great Southern Regional	13	1.7	1.7	36.6
	Gymea	2	0.3	0.3	36.9
	Hamilton	4	0.5	0.5	37.4
	Hornsby	12	1.6	1.6	39.0
	Kingscliff	1	0.1	0.1	39.0
	Kurri Kurri	1	0.1	0.1	39.2
	Leeton	2	0.3	0.3	39.5
	Lidcombe	1	0.1	0.1	39.6
	Lismore	1	0.1	0.1	39.8
	Liverpool	2	0.3	0.3	40.0
	Loftus	1	0.1	0.1	40.2
	Macquarie Fie	1	0.1	0.1	40.3
	Meadowbank	9	1.2	1.2	41.5
	Midland	1	0.1	0.1	41.6
	Miller	10	1.3	1.3	42.9
	Moorabbin	8	1.0	1.0	44.0
	Moss Vale	2	0.3	0.3	44.2
	Mount Druitt	17	2.2	2.2	46.5
	Murwillumbah	1	0.1	0.1	46.6
	New England Flxli	2	0.3	0.3	46.9
	Newcastle	7	0.9	0.9	47.8
	North Sydney	3	0.4	0.4	48.2
	Northern Beaches	2	0.3	0.3	48.4
	Northern Melbourne Ins	56	7.3	7.3	55.8
	Nowra	1	0.1	0.1	55.9
	Ons	2	0.3	0.3	56.2
	Oten	18	2.4	2.4	58.5
	Padstow	3	0.4	0.4	58.9
	Penrith	3	0.4	0.4	59.3
	Petersham	6	0.8	0.8	60.0

Table 15: Numbers of students interviewed from each college/institute (cont.)

	Course	Frequency	Percentage	Valid %	Cumulative %
	Port Macquarie	4	0.5	0.5	60.6
	Randwick	4	0.5	0.5	61.2
	Rosebud	3	0.4	0.4	61.5
	Ryde	1	0.1	0.1	61.7
	Shell Harbour	2	0.3	0.3	61.9
	Singleton	2	0.3	0.3	62.2
	South East Metropolitan	74	9.7	9.7	71.9
	South West Regional Co	15	2.0	2.0	73.9
	St George	15	2.0	2.0	75.9
	Taree	1	0.1	0.1	76.0
	Ultimo	72	9.4	9.4	85.4
	Wagga Wagga	1	0.1	0.1	85.6
	Werrington	15	2.0	2.0	87.5
	Wetherill Par	1	0.1	0.1	87.7
	Wht	89	11.7	11.7	99.3
	Wollongong	4	0.5	0.5	99.9
	Ychadstone	1	0.1	0.1	100.0
Total		762	100.0	100.0	

Results

The following summarises the responses given by interviewees under appropriate headings.

Reasons for enrolling

Students who left prior to completing their courses gave as their main reason for enrolling:

- getting a job (26.4%)
- getting extra skills for my job (23.1%)
- interest and personal development (16.4%)

Table 16: Main reason given by past students for enrolling in course

	Main reason for enrolling in course	Frequency	Percentage	Valid %	Cumulative %
Valid	To get a job (or own business)	201	26.4	26.4	26.4
	To try for a different career	40	5.2	5.3	31.7
	To get a better job or promotion	78	10.2	10.2	41.9
	It was a requirement for my job	82	10.8	10.8	52.7
	To get extra skills for my job	176	23.1	23.1	75.8
	To get into another course of study	26	3.4	3.4	79.2
	For interest or personal development	125	16.4	16.4	95.7
	Other reasons	33	4.3	4.3	100.0
Missing	System	1	0.1	100.0	
Total		762	100.0		

Figure 18: Main reason given by past students for enrolling in course

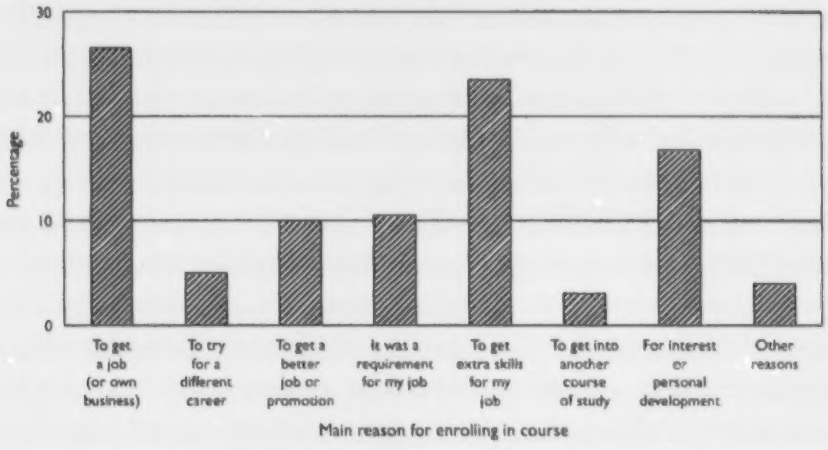
30
20
10
0
Percentage
To get a job (or own business)
To try for a different career
To get a better job or promotion
It was a requirement for my job
To get extra skills for my job
To get into another course of study
For interest or personal development
Other reasons
Main reason for enrolling in course

Table 17 shows the results of comparing graduates' main reason given for doing course[55] with those of students who left prior to completing their course (this study).

Table 17: Comparing the main reasons given by graduates for undertaking course with those of students who left prior to completing

Main reason for doing course	Left prior to completing (%)	Completed qualification (%)
Getting a job	26.4	28.8
Getting further skills for my job	23.1	13.1
Interest and personal development	16.4	13.6

The fact that a greater proportion of students who leave courses prior to completing give 'getting extra skills for my job' as a reason for enrolling *may* be linked to an intention to complete only those modules or subjects which are particularly relevant to their employment needs.

Intention to complete full or part of the course

Of respondents, 88.1% said that they intended, at the time they enrolled in the course, to complete the whole course compared to 11.9% who said their intention was to complete specific subjects in the course.

Accepting that it is likely that some respondents are likely to have alternative understandings of what constitutes a 'course', nonetheless 88.1% represents a very high proportion of the respondents.

Table 18: Intention at time of enrolment to complete whole course

Intention to complete whole course		Frequency	Percentage	Valid %	Cumulative %
Valid	The whole course	671	88.1	88.1	88.1
	Specific subjects	91	11.9	11.9	100.0
Total		762	100.0	100.0	

Figure 19: Intention of past students when enrolling to complete whole course

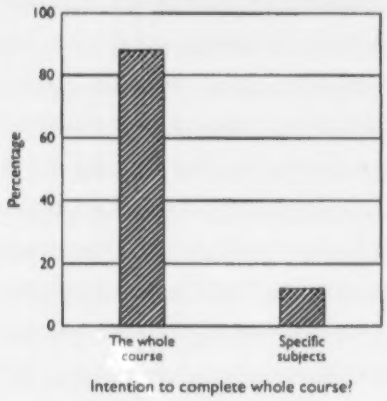

Table 19 cross-tabulates the results of the first two questions for the phone interview group:

- of those students whose main reason for enrolling was because they required further skills at work, a relatively greater proportion of them enrolled with the intention of completing specific subjects (29.7%), rather than the whole course (22.2%)
- of students who enrolled mainly for interest or personal development reasons, a relatively greater proportion enrolled with the intention to complete specific subjects
- of students whose main reason for enrolling was to get a job (or own business), a relatively greater proportion of them enrolled with the intention of completing the whole course (27.2%) rather than specific modules (20.9%)

Table 19: Main reason for enrolling vs. intention to complete whole course

Main reason for enrolling in course		Intention to complete whole course?		Total
		The whole course	Specific subjects	
To get a job (or own business)	Count	182	19	201
	% with intention to complete whole course?	27.2	20.9	26.4
To try for a different career	Count	35	5	40
	% with intention to complete whole course?	5.2	5.5	5.3
To get a better job or promotion	Count	72	6	78
	% with intention to complete whole course?	10.7	6.6	10.2
It was a requirement for my job	Count	73	9	82
	% with intention to complete whole course?	10.9	9.9	10.8
To get extra skills for my job	Count	149	27	176
	% with intention to complete whole course?	22.2	29.7	23.1
To get into another course of study	Count	23	3	26
	% with intention to complete whole course?	3.4	3.3	3.4
For interest or personal development	Count	107	18	125
	% with intention to complete whole course?	16.0	19.8	16.4
Other reasons	Count	29	4	33
	% with intention to complete whole course?	4.3	4.4	4.3
Total	**Count**	**670**	**91**	**761**
	% with intention to complete whole course?	**100.0**	**100.0**	**100.0**

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The importance of the qualification

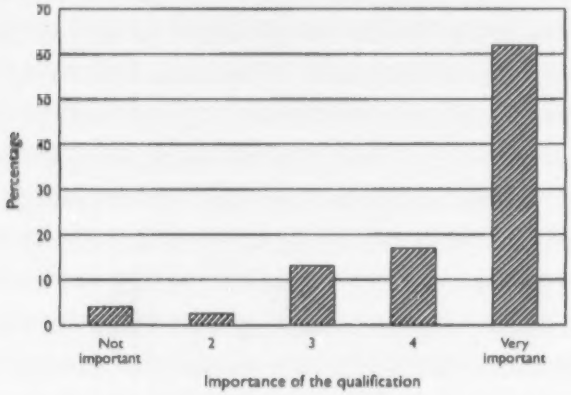
Respondents were asked to say, on a scale of 1 to 5, how important the qualification was to them when they enrolled in the course. (The idea of 'qualification' was explained as the certificate or diploma which says you have completed a course.)

Of respondents, 78.9% said that the qualification was important (17.2%) or very important (61.7%).

Table 20: Importance attached to qualification

Importance of the qualification		Frequency	Percentage	Valid %	Cumulative %
Valid	Not important	33	4.3	4.3	4.3
	2	26	3.4	3.4	7.7
	3	102	13.4	13.4	21.1
	4	131	17.2	17.2	38.3
	Very important	470	61.7	61.7	100.0
Total		762	100.0	100.0	

Figure 20: Graph of importance of qualification



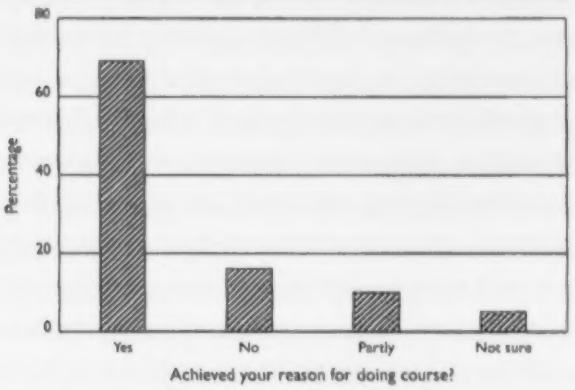
This finding accords with other research[56] which shows that students attach great importance to the gaining of a recognised qualification.

However, it may be that students' initial expectation of completing the course becomes tempered, as they progress through the course, by the knowledge that many employers use the fact of VET graduation as only one of the factors in selection or promotion of staff. As students who are also employed become aware that employers use other criteria such as work experience and work history for the purposes of selecting and promoting staff, it may be that the need to complete the qualification is reduced in importance for them. This may particularly be the case where students' main reason for enrolling was in order to gain a promotion.

Achieved reason for doing the course?

Approximately 69% of all respondents (N = 762) said that they had achieved their reason for enrolling in the course in the first place (figure 21).

Figure 21: Students' achievement of their reason for enrolling in their course



This finding, like those above, includes those Victorian and Western Australian students who completed their qualifications. If those students who said they had completed the qualification are filtered, leaving only those students who left prior to completing their course (N = 374), the results shown in table 21 are obtained.

Table 21: Proportion of those who left prior to completing course who said they achieved the main purpose for enrolling

Achieved your reason for doing course?		Frequency	Percentage	Valid %	Cumulative %
Valid	Yes	200	53.5	53.9	53.9
	No	104	27.8	28.0	81.9
	Partly	50	13.4	13.5	95.4
	Not sure	17	4.5	4.6	100.0
	Total	371	99.2	100.0	
Missing	System	3	0.8		
Total		374	100.0		

This table suggests that, of those students who self-identified as not completing their qualification, fewer (53.9%) perceived that they had achieved their main reason for enrolling in the course, compared to the whole group of students interviewed. Also a greater proportion (28.0%) of them felt they had not achieved their main reason for enrolling. Comparisons with the students in this study who self-identified as having completed the qualification are even more striking, with around 83% of completers perceiving that they had achieved their main reason for enrolling in the course and only around 7% of completers feeling that they had not achieved their main reason for enrolling.

Again these results can be compared to those given by 1997 graduates of VET courses Australia-wide.[57] The proportion of graduates reporting that their course had helped them to achieve their main reason for enrolling was 61.9%, whereas for those in our study not completing the course in which they enrolled, 53.9% reported that the course had helped them to achieve their main reason for enrolling. Also, a greater proportion of students who left prior to completing reported that the course had not helped them to achieve their main reason for enrolling (8.1% in the case of graduates compared to 28.0% of non-graduates).

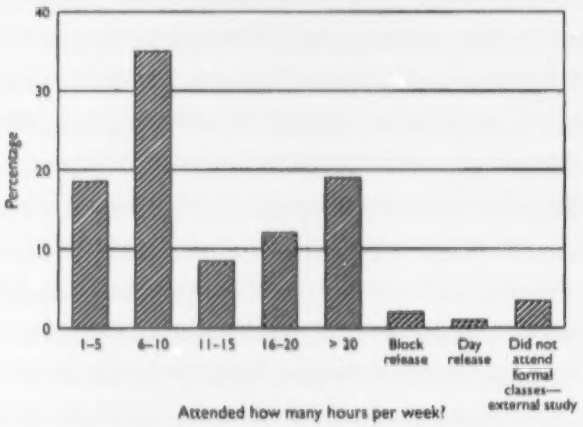
Attendance patterns and delivery mode

Respondents were asked how many hours per week they attended their course. Though the highest responses were '6–10 hours' (35.3%) and 'more than 20 hours' (18.8%), it is clear from the results that any division of respondents into 'part-time' or 'full-time' categories would at best be quite arbitrary—with considerable numbers in each of the '1–5 hours', '11–15 hours' and '16–20 hours' groups.

Table 22: Number of hours per week past students attended their course

Attended how many hours per week?		Frequency	Percentage	Valid %	Cumulative %
Valid	1–5 hours	141	18.5	18.6	18.6
	6–10 hours	268	35.2	35.3	53.9
	11–15 hours	68	8.9	9.0	62.8
	16–20 hours	89	11.7	11.7	74.6
	More than 20 hours	143	18.8	18.8	93.4
	Block release	15	2.0	2.0	95.4
	Day release	9	1.2	1.2	96.6
	Did not attend formal classes—external study	26	3.4	3.4	100.0
	Total	759	99.6	100.0	
Missing	System	3	0.4		
Total	762	100.0			

Figure 22: Number of hours per week attended course



Mode of delivery

The mode of delivery was primarily through traditional 'face-to-face' teaching at colleges (79.4%). For relatively small numbers of respondents, delivery was either combined on and off the job (10.4%), in the workplace or through external delivery.

Table 23: Delivery mode of the course

The way the course was delivered		Frequency	Percentage	Valid %	Cumulative %
Valid	Classes at college/centre	604	79.3	79.4	79.4
	Classes at the workplace	20	2.6	2.6	82.0
	Classes at both college/centre and in the workplace	79	10.4	10.4	92.4
	External study or self-paced learning (not in a classroom)	45	5.9	5.9	98.3
	Other	13	1.7	1.7	100.0
	Total	**761**	**99.9**	**100.0**	
Missing	System	1	0.1		
Total		**762**	**100.0**		

Completed the requirements for the qualification?

Interestingly, a relatively large proportion of respondents (50.9%) reported that they had completed the requirements for the course in which they were enrolled (table 24).

Table 24: Proportion of students by State who said they had completed the requirements for the qualification

		State (%)			Total (%)
		New South Wales	*Western Australia*	*Victoria*	
Completed the qualification?	Yes	28.9	63.6	66.8	50.9
	No	71.1	36.4	33.2	49.1
Total		100.0	100.0	100.0	100.0

In the case of New South Wales students in the study, this result was most surprising since, as mentioned previously, the students interviewed were exclusively selected from those who, according to TAFE NSW's information system, had not completed the requirements for the course in which they were originally enrolled.

In the case of Victoria and Western Australia, it was expected that a proportion of the students interviewed would have completed the requirements for the qualification since there was no way of filtering students who had completed their course. However these proportions were greater than expected given the estimates of the course completion rates presented in other chapters. Table 24 shows that approximately 64%–67% of the Victorian and Western Australian students who agreed to participate in the survey reported that they had completed the requirements for the qualification.

This finding raises questions, for this study and elsewhere, about how students conceptualise the notions of 'course' or 'qualification', the extent to which it is clear to them when the course or qualification has been 'completed', and how clear they are about the course requirements when they enrol in a course.

It may also have implications for those States where students are required to apply on completion of the requirements for a course for the award of the qualification. How can we be sure that students are clear about what is required for a course in which they are enrolled or when they have met those requirements?

How many subjects they had completed

Respondents were asked how many subjects they had completed while they were enrolled in the course and prior to leaving the course.

Again the uncertainty about what constitutes 'course' and 'qualification' arises—in that here only 19.1% of respondents reported that they had completed all the subjects for the qualification (compared to the previous question where 50.9% of respondents said that they had completed the qualification). However it is recognized that there are potential problems with the question, since a student completing a course consisting of (say) eight subjects has to choose between indicating completion of '5–10 subjects' and 'all the subjects for the qualification'.

Table 25: Number of subjects students reported that they completed

How many subjects did you complete?		Frequency	Percentage	Valid %	Cumulative %
Valid	None	85	11.2	11.2	11.2
	1–4 subjects	90	11.8	11.8	23.0
	5–10 subjects	102	13.4	13.4	36.4
	More than 10	255	33.5	33.6	70.0
	All the subjects for the qualification	145	19.0	19.1	89.1
	Don't Know	83	10.9	10.9	100.0
	Total	760	99.7	100.0	
Missing	System	2	0.3		
Total		762	100.0		

The misunderstanding raised in the discussion above is shown more directly in a cross-tabulation of the results of the previous two questions (table 26). This shows, for example, that 21 students who reported that they had completed no subjects, nonetheless stated that they had completed the requirements for the qualification. Also, there were nine students who said they had completed all the subjects for the qualification—but who at the same time said they had not completed the qualification.

Table 26: How many subjects completed vs. completed the qualification?

How many subjects did you complete?		Completed the qualification		
		Yes	No	Total
Valid	None	21	64	85
	1–4 subjects	19	71	90
	5–10 subjects	36	66	102
	More than 10	145	110	255
	All the subjects for the qualification	136	9	145
	Don't Know	29	54	83
Total		386	374	760

These issues clearly have implications both for those designing questions in which students are asked about 'courses' and 'qualifications' and for those whose responsibility it is to ensure that students know their standing with respect to their studies.

Reasons students did not complete courses

Section C was the most lengthy section of the interview schedule—with respondents being asked to rate the importance of 58 possible factors on their decisions to leave courses prior to completing them. The scale provided was a four-point scale:

0 = not at all true; not a factor in my decision not to complete the course

1 = to some extent true—but not important

2 = true/important

3 = true/very important

The students actually responded by giving these scores according to the list above.

Responses for those respondents who said that they did not complete the qualification are summarised in table 27. A 'weighted score' was calculated for each item by weighting each of the responses 0, 1, 2 or 3. The various reasons were then sorted according to the scores provided.[58]

Table 27 shows that most of the reasons rated as important or very important factors on students' decisions not to complete a course are predictable and to be expected from previous research. These relate to:

- the time and work demands of course/study being too great
- employment changing while studying
- changing career goals with the result that the course was no longer relevant
- difficulties balancing study with commitments to family
- getting what was wanted from the course without needing to complete the whole course
- finding that the course was not appropriate to their needs

More surprising perhaps, are a number of factors which have implications for course design and delivery. Four of the ten highest rating reasons included:

- not being able to get credit for learning students already had
- not being able to select subjects because they could only be done in a particular order
- having to complete subjects that were not relevant to what the student wanted to do
- the timing of assessment tasks meant that the student would often have too many assessments at the same time

Important for course and curriculum designers and for training providers is the fact that there are measures they can implement to address and to reduce the impact of each of these factors.

Table 27: Factors which influenced students decision to leave a course prior to completing

No.	To what extent did any of the following factors influence your decision to leave the course before completing it?	0	1	2	3	Weighted score	Rank
5	I found the time and work demands of course/study too great	171	53	62	87	1.17	1
11	My employment changed while I was studying	220	15	33	104	1.06	2
36	I had to complete subjects that were not relevant to what I wanted to do	191	45	61	75	1.05	3
42	I wasn't able to get credit for learning that I already had when I started the course	215	23	37	95	1.03	4
17	I changed my career goals—and the course was no longer relevant	213	31	42	85	1.00	5
6	I had difficulties balancing study with commitments to my family	208	46	52	65	0.93	6
14	I got what I wanted from the course without needing to complete the whole course	215	46	50	61	0.88	7
39	I couldn't select the subjects I wanted to do because subjects could only be done in a particular order	227	27	50	67	0.88	8
47	The timing of assessment tasks meant that I would often have too many assessments at the same time	234	28	45	63	0.83	9
16	I found that the course was not appropriate to my needs	231	39	46	56	0.80	10

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Table 27: Factors which influenced students decision to leave a course prior to completing (cont.)

No.	To what extent did any of the following factors influence your decision to leave the course before completing it?	0	1	2	3	Weighted score	Rank
52	The timetable did not suit me or my work commitments	232	38	40	59	0.80	11
28	The quality of the teaching was not what I expected	228	46	52	46	0.77	12
21	I just lost interest	232	46	43	51	0.77	13
34	Too many subjects were required to complete the course	233	41	50	48	0.77	14
24	I wasn't happy with the teacher or other students in the course	231	53	43	45	0.74	15
49	I didn't get adequate feedback after assessment events	238	40	49	43	0.72	16
50	The course had too great a workload each week and I found it hard to keep up	233	47	50	40	0.72	17
9	I needed better personal skills such as time management, planning and organisational skills	234	50	55	34	0.70	18
58	There was too little communication/ interaction between the teacher/trainer and students within the course	239	48	41	43	0.70	19
55	The way in which the teacher taught did not suit the way I learn	245	36	52	38	0.68	20
38	The choice of subjects was not really relevant to my needs	239	48	50	33	0.67	21
33	The course was too long—and went over too many weeks or years	259	26	42	45	0.66	22
41	The course didn't seem to provide enough workplace learning opportunities such as work experience and work placement	255	30	42	43	0.66	23
37	There wasn't enough choice in the range of subjects available in the course	242	48	48	33	0.65	24
19	I transferred to a more appropriate course	282	10	14	65	0.63	25
30	The location of my place of training was not close enough to home or work	271	23	26	52	0.62	26
57	There was no tutorial support or teacher assistance provided when I had difficulties	254	44	39	34	0.60	27
45	I was able to use the subjects I had completed to gain entry (or for advanced standing) in another course	278	14	25	53	0.60	28
35	Many of the subjects in the course were too long	250	51	45	25	0.58	29
10	I had trouble keeping up-to-date with the learning I was required to do at home	249	56	43	23	0.57	30
22	I was not happy with the quality of the course	261	46	30	35	0.57	31
20	I transferred to another institution	293	9	8	61	0.56	32
26	The pre-course information and advice didn't explain the course or the subjects in the course well enough	265	41	28	36	0.55	33
56	The design of the learning materials did not suit the way I learn	261	47	36	26	0.53	34

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Table 27: Factors which influenced students decision to leave a course prior to completing (cont.)

No.	To what extent did any of the following factors influence your decision to leave the course before completing it?	0	1	2	3	Weighted score	Rank
48	I get anxious about assessment and left because assessment tasks were due	276	30	32	31	0.51	35
51	I was required to attend college/place of learning for too many hours per week	279	36	26	30	0.48	36
46	I didn't feel that the assessment tasks were appropriate to the course goals	278	25	50	17	0.48	37
40	I couldn't select the subjects I wanted to do because they were not offered in the college where I was studying	287	30	17	35	0.46	38
44	Rather than completing the course in which I enrolled, I was able to leave the course with another qualification	294	17	27	32	0.45	39
1	Employment opportunities within my industry are declining and I couldn't see the point in finishing my course	290	29	25	29	0.45	40
23	I didn't feel that the course was valuable	285	35	22	28	0.44	41
18	I chose the wrong course	290	33	17	32	0.44	42
29	The quality of the facilities was not what I expected	283	37	28	23	0.44	43
7	I had difficulties balancing study with my social commitments and friends	279	48	25	20	0.42	44
3	I couldn't afford to remain in study	300	21	19	33	0.42	45
25	There was not enough opportunity to interact with other students within the course	300	28	24	19	0.36	46
43	There weren't subjects in the course to provide opportunities for me to learn basic skills, particularly in language, maths, etc., which I needed in order to be successful	309	20	15	26	0.35	47
27	I found that services such as child care, library, cafeteria, etc. were either not available or not available at appropriate times	313	20	19	20	0.32	48
2	I wasn't able to get a student/ government allowance.	322	12	13	26	0.31	49
32	I couldn't get access to appropriate workplaces for work experience/work placement sections of course	317	19	14	22	0.30	50
31	I didn't have good enough access to transport to get to my place of training	320	19	14	19	0.28	51
4	At the time I was studying, there were events in our local community which were more important than study	327	18	14	14	0.24	52
8	The level of writing and reading skills required in the course were too difficult	333	22	9	9	0.18	53
	*** Specific questions were also asked of subgroups of respondents, with the following results:**						
12	(Of those whose employment changed) As a result, the course was less relevant to my work	65	11	21	50	1.38	
13	(Of those whose employment changed) My new job meant that I didn't have the time/opportunity to complete the course	45	14	21	66	1.74	

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Table 27: Factors which influenced students decision to leave a course prior to completing (cont.)

No.	To what extent did any of the following factors influence your decision to leave the course before completing it?	0	1	2	3	Weighted score	Rank
15	*(Of those who got what they wanted from the course without needing to complete the whole course)* I completed all the subjects I wanted to do	77	20	27	41	1.19	
53	*(Of those students who were learning in a face-to-face situation in a college)* It did not suit me to have to attend college each week to go to classes/ training sessions. I would have preferred to have been able to learn at home or while I was working	196	24	40	78	1.00	
54	*(Of those students who were learning externally)* It did not suit me to learn externally. I would have preferred to have been able to go to the college for classes	22	2	2	13	1.15	

Note: * In each of these five cases the proposed explanations or expansions were strongly supported.

In interpreting this table it should be noted that students were 'generous' in their identification of reasons for not completing a course: on average they each rated six different factors as 'very important'.

Delivery mode

Of those non-completing students studying in face-to-face delivery contexts, 34.9% rated the fact that they would prefer to learn at home or while they were working as an important or very important factor in their decision not to complete the course in which they were enrolled.

Table 28: Students' preference for learning at home or while working

Would have preferred to be able to learn at home		Frequency	Percentage	Valid %	Cumulative %
Valid	0	196	25.7	58.0	58.0
	1	24	3.1	7.1	65.1
	2	40	5.2	11.8	76.9
	3	78	10.2	23.1	100.0
	Total	338	44.4	100.0	
Missing	System	424	55.6		
Total		**762**	**100.0**		

Although the numbers involved are small, it is worth noting that, of those learning externally, 38.4% (i.e. 15 out of 39) rated as important or very important that they would prefer to learn at college. In other words, very similar percentages indicated they would have preferred to swap between internal and external mode in either direction.

Table 29: Students' preference for learning at college

Did not suit me to study externally; would have preferred to attend college		Frequency	Percentage	Valid %	Cumulative %
Valid	0	22	2.9	56.4	56.4
	1	2	0.3	5.1	61.5
	2	2	0.3	5.1	66.7
	3	13	1.7	33.3	100.0
	Total	**39**	**5.1**	**100.0**	
Missing	System	723	94.9		
Total		**762**	**100.0**		

These results highlight the fact that many students learning in traditional face-to-face contexts would prefer to learn either externally at home or in the workplace. On the other hand, the findings also show the strong preference of a significant proportion of VET clients for face-to-face training, a finding reported also by Christie & Warner[50]. This finding, though not surprising, highlights the dilemma for providers intent on encouraging students to complete their courses of meeting the different learning preferences of students.

Transferring to another course or institution

Transferring from one course to another accounted as an important factor for a considerable proportion of students. Seventy-nine out of 371 (21.3%) students said that transferring to another course was an important or very important factor in their leaving their course prior to completion (table 30). Sixty-nine students (18.6%) indicated that transferring to another institution was an important or very important factor in their decision to leave prior to completing their course.

Table 30: Students transferring to another course

I transferred to a more appropriate course		Frequency	Percentage	Valid %	Cumulative %
Valid	0	282	37.0	76.0	76.0
	1	10	1.3	2.7	78.7
	2	14	1.8	3.8	82.5
	3	65	8.5	17.5	100.0
	Total	**371**	**48.7**	**100.0**	
Missing	System	391	51.3		
Total		**762**	**100.0**		

Factor analysis

A factor analytical approach was used to test whether or not the data from the interviews could be classified into appropriate factors. In fact 15 factors with initial eigenvalues greater than 1.0 emerged in the factor analysis accounting for 47.6% of the variance in the respondents' data. In order to compare the results with the seven-factor solution produced by Mantz Yorke,[48] it was decided to force a seven-factor solution. This resulted in seven reasonably distinct factors accounting for 36.2% of the variance. The loadings over 0.400 of the rotated matrix arising from the factor analysis are shown in table 31.[51]

Table 31: Rotated matrix—seven-factor solution

	Factor						
	1	*2*	*3*	*4*	*5*	*6*	*7*
Employment opportunities in industry declining							
Not able to get student/government allowance							
Couldn't afford to remain in study							
Events in local community more important than study							
Time/work demands of course too great		0.489					
Difficulties balancing study with family commitments							
Difficulties balancing study with social commitments/friends		0.498					
Level of reading and writing too difficult		0.442					
Needed better personal/time management skills		0.563					
Trouble keeping up to date with work required to do at home		0.549					
Employment changed while I was studying							
Got what I wanted from course without completing whole course							
Found that the course was not appropriate to my needs				0.773			
I changed my career goals and the course was no longer relevant				0.696			
I chose the wrong course				0.667			
I transferred to a more appropriate course						0.718	
I transferred to another institution						0.741	
I just lost interest				0.498			
I was not happy with the quality of the course	0.631						
I didn't feel that the course was valuable				0.430			
I wasn't happy with the teacher or other students in the course	0.650						
There was not enough opportunity to interact with other students in the course							
Pre-course information and advice did not explain course well enough	0.542						
Services such as childcare, library, not available							
The quality of the teaching was not what I expected	0.768						
The quality of the facilities was not what I expected	0.463						
Location of place of training not close enough to home or work							0.471
Didn't have good enough access to transport to get to place of training							0.589
Couldn't get access to workplaces for work experience/work placement							
The course was too long—went over too many months or years			0.576				
Too many subjects were required to complete the course			0.634				
Many of the subjects in the course were too long			0.634				
Had to complete subjects which were not relevant to what I wanted to do			0.437				
There wasn't enough choice available in the range of subjects available			0.443				
The choice of subjects was not really relevant to my needs				0.460			

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Table 31: Rotated matrix—seven-factor solution (cont.)

	Factor						
	1	2	3	4	5	6	7
I couldn't select subjects I wanted to do because they could only be done in a particular order			0.438				
Couldn't select subjects I wanted to do because they weren't offered in the college where I was studying							
Course didn't provide enough workplace learning opportunities such as work experience							
I wasn't able to get credit for learning that I already had when I started the course							
There weren't subjects in the course which enabled me to learn basic skills—particularly in language, maths, etc.							
Rather than completing the course in which I was enrolled, I was able to leave with another qualification							
I was able to use the subjects I completed to gain entry/credit in another course							
I didn't feel that the assessment tasks were appropriate to the course goals					0.401		
Timing of assessment events would mean that I would have too many assessments at the same time		0.461			0.412		
I get anxious about assessment events and left when assessment events were due		0.433					
I didn't get adequate feedback after assessment events	0.496				0.405		
The course had too great a workload and I found it difficult to keep up		0.638					
I was required to attend college/place of learning too many hours per week							
The timetable did not suit me or my work commitments							
The way in which the teacher taught did not suit the way I learn	0.756						
The design of the learning materials did not suit the way I learn	0.577						
There was no tutorial support or teacher assistance when I had difficulties	0.612						
Too little communication/interaction between teacher/trainer and students within the course	0.633						

Note: Extraction method: Principal Axis Factoring. Rotation method: Varimax with Kaiser Normalisation. (Rotation converged in 15 iterations.)

One interpretation of the seven factors which emerged from the factor analysis process follows. As Yorke[62] points out, it is important not to confuse the percentage of variance explained by a factor with its salience. For example, reference to table 27 shows that employment changing while studying was the second most frequently given reason influencing a student's decision to leave a course prior to completion. Likewise, difficulties balancing family commitments and study appears in the same table as the sixth most frequently given reason. Yet neither of these reasons appears in any of the seven factors when absolute values less than 0.4 are suppressed.

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The first factor 'Quality of course delivery', accounting for 9.6% of the variance, draws together a number of clearly related reasons to do with quality of the program and style of delivery:

- I was not happy with the quality of the course.
- I wasn't happy with the teacher or other students in the course.
- Pre-course information and advice did not explain course well enough.
- The quality of the teaching was not what I expected.
- The quality of the facilities was not what I expected.
- I didn't get adequate feedback after assessment events.
- The way in which the teacher taught did not suit the way I learn.
- The design of the learning materials did not suit the way I learn.
- There was no tutorial support or teacher assistance when I had difficultie.s
- Too little communication/interaction between teacher/trainer and students within the course.

A second factor (accounting for 6.6% of the variance) grouped a number of reasons related to 'Time demands of the course and personal management skills':

- time/work demands of course too great
- difficulties balancing study with social commitments/friends
- level of reading and writing too difficult
- needed better personal/time management skills
- trouble keeping up to date with work required to do at home
- timing of assessment events would mean too many assessments at the same time.
- I get anxious about assessment events and left when assessment events were due
- course workload too great to keep up without difficulty

A third factor 'Length, relevance and flexibility of course' (accounting for 5.4% of variance):

- course too long—over too many months or years
- too many subjects required to complete the course
- many subjects in the course were too long
- had to complete subjects not relevant to what I wanted to do
- not enough choice available in the range of subjects available
- couldn't select subjects I wanted because they could only be done in a particular order.

The fourth factor (accounting for 5.0% of variance) related to 'Course not appropriate to needs; changed career goals' focussed on changing career goals and appropriateness of a course to these changed career goals:

- I found the course was not appropriate to my needs.
- I changed my career goals and the course was no longer relevant.
- I chose the wrong course.
- I just lost interest.
- I didn't feel that the course was valuable.
- The choice of subjects was not really relevant to my needs.

A fifth factor (accounting for 4.3% of variance) brought together a range of reasons dealing with 'Appropriateness and timing of assessment':

- I didn't feel that the assessment tasks were appropriate to the course goals.
- Timing of assessment events would mean that I would have too many assessments at the same time.
- I didn't get adequate feedback after assessment events.

The sixth factor (accounting for 2.8% of variance) which emerged related to 'Transferring to a more appropriate course or another institution':

- I transferred to a more appropriate course.
- I transferred to another institution.

The seventh factor (accounting for 2.5% of variance) related to 'Location of training and travel':

- Location of place of training was not close enough to home or work.
- I didn't have good enough access to transport to get to place of training.

The set of factors derived from the factor analysis process depends to a considerable extent on the number of factors forced by the process. An alternative set of six factors, accounting for 36.4% of the variance, was derived based just on the New South Wales respondents.[43] This list of six factors shows some key differences from the seven listed above:

- quality and appropriateness of course/quality and appropriateness of delivery
- difficulties balancing family, work and social commitments
- course not appropriate to needs; changed career goals
- changes in employment and/or getting what was wanted from course without completing a course
- students' personal skills—basic reading and writing skills and personal and time management skills
- transferring to a more appropriate course or another institution

These lists of factors serve primarily as a means for reducing an extensive list of possible reasons into a smaller number of groups of reasons. They may be useful in the future design of surveys and questionnaires into students' reasons for leaving courses prior to completion.

Employment and employment changes while studying

Section D of the interview asked all respondents about their employment situation while they were studying. Since all respondents answered the questions in this section, the results include the responses of students who completed all the requirements for the course in which they were enrolled.

Primarily what we are interested in examining in this section is the extent to which changing employment is a factor in students' decisions to leave courses prior to completion. The results suggest that a considerable proportion of students who leave prior to completing their course change employment while they are studying. Further for many of these students, their study is less relevant as a result of their change in employment.

Considering first the whole group of respondents (N = 762) nearly 80% were employed at the time of enrolling in their course (table 32).

Table 32: Employment situation for all respondents during their course

Employment situation during course		Frequency	Percentage	Valid %	Cumulative %
Valid	Employed full-time	409	53.7	53.8	53.8
	Employed part-time	181	23.8	23.8	77.6
	Self employed	24	3.1	3.2	80.8
	Employer	1	0.1	0.1	80.9
	Not employed/seeking work	79	10.4	10.4	91.3
	Not employed/not seeking work	62	8.1	8.2	99.5
	Not sure	4	0.5	0.5	100.0
	Total	**760**	**99.7**	**100.0**	
Missing	System	2	0.3		
Total		**762**	**100.0**		

28.3% of all students responding to section D changed employment while studying (table 33).

Table 33: Proportion of all respondents who changed employment while studying

While you were studying, did you change your employment?		Frequency	Percentage	Valid %	Cumulative %
Valid	Yes	213	28.0	28.3	28.3
	No	539	70.7	71.7	100.0
	Total	**752**	**98.7**	**100.0**	
Missing	System	10	1.3		
Total		**762**	**100.0**		

Of those students who indicated that they changed their employment while studying, nearly 70% indicated that their study was still relevant to their employment (table 34).

Table 34: Relevance of training after a change in employment—for all students who responded to survey

If yes, was your study relevant to your new employment?		Frequency	Percentage	Valid %	Cumulative %
Valid	Yes	145	19.0	68.4	68.4
	No	67	8.8	31.6	100.0
	Total	212	27.8	100.0	
Missing	System	550	72.2		
Total		**762**	**100.0**		

Employment changes and those students who left prior to completing

Referring back to the results of section C, we see that the reason 'My employment changed while I was studying' was rated as an important or very important reason for leaving their course by 137 of the 372 respondents (table 35). If we interpret this result to mean that most of these students changed their employment, it means that at least 37% of those students who left prior to completing their course changed employment while studying.

Table 35: Employment changes while studying for students who left complete course prior to completing

Employment changed while I was studying		Frequency	Percentage	Valid %	Cumulative %
Valid	0	220	28.9	59.1	59.1
	1	15	2.0	4.0	63.2
	2	33	4.3	8.9	72.0
	3	104	13.6	28.0	100.0
	Total	**372**	**48.8**	**100.0**	
Missing	System	390	51.2		
Total		**762**	**100.0**		

Table 36 shows the result of cross-tabulating the results of the two questions 'While you were studying did you change your employment?' and 'Did you complete the qualification?'. It can be seen that a significantly greater proportion of students who left prior to completing their course changed employment while studying ($p = 0.001$). In general terms this confirms our inference in the previous section, as 124 of 368 non-completing respondents said that they did change employment.

Table 36: Employment change while doing course vs. completed the course

Completed the qualification			While you were studying did you change your employment?		Total
			Yes	No	
	Yes	Count	89	295	384
		% within completed the qualification?	23.2	76.8	100.0
		% of total	11.8	39.2	51.1
	No	Count	124	244	368
		% within completed the qualification?	33.7	66.3	100.0
		% of total	16.5	32.4	48.9
Total		**Count**	**213**	**539**	**752**
		% within completed the qualification?	**28.3**	**71.7**	**100.0**
		% of total	**28.3**	**71.7**	**100.0**

Again referring back to section C, we see that of the students who stated that 'My employment changed while I was studying' was an important or very important reason for leaving their course, nearly half (48.3%) indicated that 'My study was less relevant as a result of changing employment' was an important or very important factor in their reason for leaving prior to completing their course (table 37). This result *may* indicate that a considerable proportion of students who leave courses prior to completion have changed their career goals and moved into new areas of employment.

Table 37: Relevance of study after a change in employment

As a result the course was less relevant to my work		Frequency	Percentage	Valid %	Cumulative %
Valid	0	65	8.5	44.2	44.2
	1	11	1.4	7.5	51.7
	2	21	2.8	14.3	66.0
	3	50	6.6	34.0	100.0
	Total	147	19.3	100.0	
Missing	System	615	80.7		
Total		762	100.0		

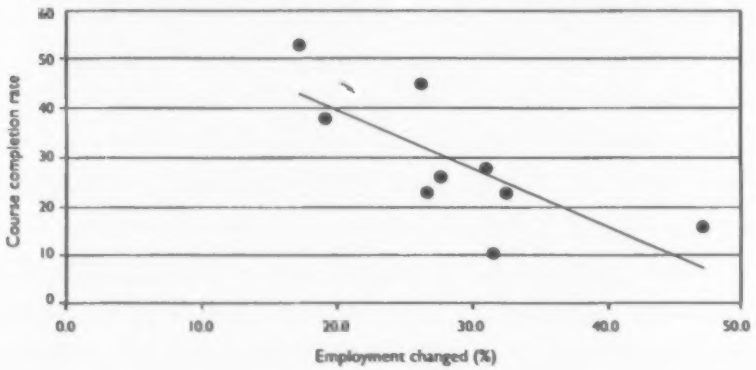
More than half the students (59.6%) who did not complete their courses and whose employment changed while they were studying indicated that their new job meant that they didn't have time to study (table 38).

Table 38: Impact of a change in employment on time to study

New job meant I don't have time/opportunity to complete study		Frequency	Percentage	Valid %	Cumulative %
Valid	0	45	5.9	30.8	30.8
	1	14	1.8	9.6	40.4
	2	21	2.8	14.4	54.8
	3	66	8.7	45.2	100.0
	Total	146	19.2	100.0	
Missing	System	616	80.8		
Total		762	100.0		

For interest, the New South Wales responses were analysed by course and a graph produced of the proportion of students indicating that their employment changed during their course against the course completion rates for each of the courses. The result is shown in figure 23.

Figure 23: Course completion vs. employment changing for case study courses



The graph suggests that as the proportion of students who change employment during their course increases, the course completion rate decreases—and that changing employment during a course is an important factor in course completion rates.

End-points alternative to course completion?

Considering the results from the previous chapters, it is possible to make some rough estimates of some of the likely end-points for students who enrol in VET courses. The results of the combined data tend to suggest that of the students who enter VET courses in any one year:

- Approximately 18%–37% of them complete the course (based on the average course completion rates reported in chapter 4).
- Up to 14% of enrolled students do not complete a single module (based on the module completion patterns from the NSW case studies).
- Approximately 25%–30% change employment—and of these one-third report that their TAFE course is no longer relevant to their work.
- Approximately 10%–20% transfer into another course while doing their TAFE course.

These end-points account for a considerable proportion of the cohort entering courses in any one year. Except in the case of students who enrol and then leave prior to completing any modules, many would argue that these end-points represent legitimate alternative outcomes to course completion for many students.

5 Discussion and suggestions for further research

Introduction

The discussion which follows attempts to draw together some of the findings of the project. In addition, it raises a number of issues and questions which appear to arise from the findings. In particular, the following issues are discussed:

- the extent to which course structure factors impact upon course completion rates
- course completion as being only one legitimate end-point of VET
- the appropriateness of measures such as qualifications or course completions as performance indicators of the efficiency of the VET system
- the notion of flexible course design, apparent and real flexibility in course design and the expectation of many that flexible course design will lead to improved course outcomes
- potential tensions between efforts to improve module completion and course completion
- some issues which have implications for policy

Completion rates

The project has shown that a sample of course completion rates (as they have been defined in the project) for individual 'major award' courses within the VET system spanned the full possible range from about 1.8% to 100.0%. Average completion rates within States, as best they can be estimated from this sample, are in the range 18% to 37% with considerable variation between States and providers.

Such 'bald' statements need to be considered in the context of a wide range of factors and issues which impact upon completion rates and how they are interpreted. Some of these are addressed later in this discussion.

Relationships between course completion and course structure

Underpinning the original brief for this project was an idea that if one could identify those course structure factors related to course completion, then we could improve course completion by 'improving' course design.

That the project has discovered very few relationships between course completion and course design, and certainly no strong relationships, is hardly surprising. Nearly all research which has been undertaken to date suggests that it is other factors, particularly personal factors relating to individual students, and delivery issues, such as the quality of teaching, which are likely to have the greatest impact upon students' decisions to leave courses prior to completion. For this reason, it is not a cause for concern that this project has shown no strong relationships between course structure and course completion.

On the other hand, among the results are findings which have implications for policy and may be the subject of further worthwhile research. Firstly, a summary of the findings.

Course duration and number of modules required to complete qualification

- Shorter courses tend to have higher completion rates and longer courses lower completion rates.
- Courses where students have to complete greater numbers of modules in order to complete a qualification tend to have lower completion rates.

It is questionable though whether duration or number of modules, as aspects of course structure, are likely to be important factors by themselves in course completion. It is not difficult to find other reasons why students might leave before completing longer courses and courses with greater numbers of modules. Over a longer period of time students will be subjected to the wide range of personal, employment, environmental and other factors which might cause them to leave a course. Longer courses will invariably comprise more modules amongst which there are likely to be some required for course completion but which the student does not necessarily want to take. On the other hand, in shorter courses, students are likely to have a clear idea of what it is they expect of the modules and high commitment to complete them.

Average module length and course completion rate

Previous studies have explored the relationship between module duration and module completion with the results generally suggesting that shorter module length leads to higher module completion rates. Considering the relationship between course completion rates and module length, the findings are much less clear. The results from New South Wales and Victoria suggest that there is no statistically significant relationship between average module length and course completion rates. In the case of Western Australian courses, average module length is the course structure factor which emerges from regression analysis as the best predictor of course completion rates—with longer module durations being linked to higher course completion. (However it is important to bear in mind that having fewer modules in a course—which in general leads to a higher completion rate—is logically associated with having modules of greater average length.)

If module duration is linked with course completion rates, and this is not clear, it is likely that other factors which come into play as module duration increases are important, rather than module duration itself. One possibility is that students will 'wear' a short module on the basis that it only goes over a few sessions—it may take them this long to form an opinion of how useful or appropriate the module is. On the other hand with longer modules, students have time to develop opinions of the quality of the program, the quality of the teacher and the appropriateness of the module. When weighed up against all of the other factors in their lives which compete for time, it is during the longer course or module where students may opt to leave prior to completing.

Core-elective structures and extent of choice amongst electives

The results relating to core-elective structures are possibly the most interesting findings of the analysis of the relationships between course structure and course completion rate. The

original brief for the project referred to 'rigid' course structures when describing courses with core-only structures. Implicit in this description is the belief that courses with fixed structures are likely to have lower completion rates and that flexibility and choice in course design are likely to lead to higher completion rates.

What the results showed though was that in each of the three States in the project:

- Courses with core-only structures had significantly higher completion rates than courses with core-elective structures.
- When courses were grouped according to completion rate, courses in which students were provided a broad range of electives were more likely to be amongst those with lower completion rates.
- In those courses with higher completion rates, students were able to choose from a much more limited range of electives, averaging less than one module per course.

In courses with lower completion rates, students were provided with a broader range of modules from which to choose, averaging greater than 80 modules. Supporting this finding, in Victoria the proportion of the available elective hours which is to be completed by students emerges as the course structure factor which is the best predictor of course completion rates.

An obvious question arises about the link between completion rate and moves to increase flexibility by increasing the number of elective choice in courses: 'has increasing student choice actually led to a decreased completion rate?'.

The implementation of courses based on industry competency standards has created an increasingly common course structure model in which students are able to select from large groups of elective modules, sometimes in excess of 200 or more. The justification for such course structures relates to the requirement to meet the specific needs of students and employers. *It may be that as a result of increased flexibility in course structures, a situation has been created in which students perceive a lesser need to complete a qualification.* These questions are taken up again later in this discussion.

The extent to which course structure factors influence students' reasons for not completing courses

The results reported so far in this chapter were derived from analysis based on consideration only of single variables. They are therefore limited in the extent to which they have taken into account interactions among the broad range of additional factors which may impact upon completion rates. Nor do they provide much insight into whether or not course structure factors influenced students' decisions to leave courses prior to completing.

The phone interviews which were undertaken of students across the three States as part of this study aimed to address this question.

An overview of the responses of students who left courses prior to completing

Students who left courses prior to completing generally enrolled in the first place to gain a job or to get extra skills for their job. Their reasons for enrolling are the same as those of graduates who have responded to previous Graduate Destinations Surveys. However the proportion of responses are different for the two groups. A greater proportion of students who left courses prior to completing gave 'getting extra skills for my job' as a reason for enrolling compared to graduates. If these students are enrolling primarily with the intention

of completing particular modules to gain employment-related skills, then clearly this will impact upon course completions.

A very high proportion of students who left courses prior to completing (88.1%) responded that they had intended to complete the whole course at the time of enrolment. A relatively small proportion said their intention was to complete just specific subjects in the course. Where students were enrolling in order to get a job or their own business, a greater proportion of them enrolled with the intention of completing the whole course, whereas for students whose reason was to obtain extra skills for their job, a greater proportion intended to complete specific modules.

Nearly all students attach great importance to the gaining of a qualification with nearly 80% saying that the qualification is important or very important. This finding accords with other research[44] which shows that students regard the gaining of a recognised qualification as an important outcome.

Compared to graduates, fewer students who left courses prior to completing their qualification perceived that they had achieved their reasons for enrolling in the course. This finding, which is consistent with the finding that the vast majority of students enrolling 'intend' to complete their qualification, reminds us that although many of those who leave before completing do achieve their reasons for enrolling, the proportion of non-completers who achieve their reasons for enrolling is smaller than is the case amongst completers. It also highlights the limitations of surveys and approaches to course evaluation which reflect *only* the perceptions of those who have completed major award courses. For the purposes of targeting the VET system to the needs of its 'less satisfied' customers, greater use needs to be made of methodologies which take account of the views of those who have left the system prior to completing qualifications.

Students' reasons for leaving prior to completion

Students' reasons for leaving courses are likely to be complex and the result of combinations of factors, rather than single factors. For this reason, students were not asked to identify a single most important reason for not finishing a course. Instead they were asked to rate how important each of a range of possible reasons was for them in their decision to leave. They did so generously, identifying on average six of the 58 suggested possible reasons as being 'very important' factors.

Amongst the top ranking reasons, there was considerable overlap with the findings of other studies which have found that it is mainly as a result of personal factors (rather than course structure factors) that students do not complete courses, although some structure factors did emerge as relatively important. In this study the personal factors which figured most highly related to time and work demands of the course, changing employment and changing career goals and balancing study with commitments to family.

Other important reasons related to students' intentions in undertaking the course in the first place. Many students responded that they left because they had got what they wanted from the course, others that they found the course was not appropriate to their needs.

More surprising, amongst the most important reasons given for not completing a course were a number of factors which have implications for course design and delivery. Four of the ten highest ranking reasons included these issues related to course structure:

- not being able to get credit for learning students already had
- not being able to select subjects because they could only be done in a particular order
- having to complete subjects that were not relevant to what the student wanted to do
- the timing of assessment tasks requiring students to do too many assessments at the same time

That these factors were ranked so highly by many students who left prior to completing their courses was unexpected since factors such as these had not emerged in previous studies as significant factors in students' decision making. There are a number of possible explanations for this. Firstly, previous studies have not included these types of course structure or delivery factors as options for students to select. Secondly, most previous studies have asked respondents to select the single main reason or the single most important reason they did not complete their course. In this study though, respondents were able to identify the relative importance of reasons which together may have impacted upon their decision making. This is more likely to represent the real situation for many students where no one factor is likely by itself to result in students deciding to leave a course. Rather it is likely to be the cumulative effect of a collection of factors which ultimately causes a student to make a decision to leave a course prior to completion.

A factor analytical approach was used to test whether or not the data from the interviews could be classified into appropriate factors. A seven-factor solution was derived which resulted in seven reasonably distinct factors:

- quality of course delivery
- time demands of the course and personal management skills
- length, relevance and flexibility of course
- course not appropriate to needs; changed career goals
- appropriateness and timing of assessment
- transferring to a more appropriate course or another institution
- location of training and travel

Generally these factors align with previous research in the VET sector relating to the reasons students leave courses prior to completion. It is interesting that a number of highly ranked reasons have not emerged as salients in the factor analysis solution. For example, employment changing while studying was the second most frequently given reason influencing a student's decision to leave a course prior to completion. Likewise, difficulties balancing family commitments and study appears as the sixth most frequently given reason. Yet neither of these reasons appears to load heavily on any of the seven factors.

The usefulness of the factor analytical method is in reducing an extensive list of reasons into a smaller set of groups of reasons which together explain the greatest proportion of variance in the students' responses. The factors which have been derived may be useful in the future design of surveys and questionnaires into students' reasons for leaving courses prior to completion.

In relation to personal factors which impact upon completion, there is often little that providers can do to overcome the effects of these and to encourage students to complete their courses. However, in relation to the specific factors listed above, there are measures that course developers and providers can implement to reduce the impact of these factors on students' decisions to leave. Some of these measures might include improved and systematic processes for ensuring that students are able to gain credit for prior learning, ensuring that the sequencing of modules/units is appropriate and takes into account student needs and external commitments, as well as improved planning of assessment processes across course requirements, rather than on a module-by-module or unit-by-unit basis.

Some key issues

Flexibility in course design

The concept of 'flexibility' is so commonly and variously used in discussions about vocational education and training, one wonders whether the expression has much meaning or value at all. In the context of course design, flexibility is promoted as a means of meeting

the market needs for 'increased choice for students', 'meeting the needs of industry' and 'ensuring that students have opportunities to select modules which meet their needs'.

Flexibility is often interpreted within course design as implying highly modularised courses with a broad range of elective choice. As part of this flexibility, lower-level courses may be embedded in higher-level courses, providing a range of possible exit points for students.

Intuitively, most people spoken to during this project expected that these flexible course structures would lead to higher completion rates and that courses with these more flexible structures would have higher completion rates than courses with more traditional core-only structures. There appears to be a widespread conventional wisdom that 'choice is good' and that 'more choice is even better'. But better for the purpose of achieving what outcome and for whose benefit?

But the study suggests the contrary: courses with less choice appear to have higher completion rates.

As previously mentioned, one interpretation of the project findings is that students are less likely to complete courses with core-elective structures, particularly where faced with a large choice of electives. The project findings raise the possibility of a potential tension between, on the one hand, the requirement to meet students' and employers' needs and, on the other, encouraging students to complete the formal requirements of a course.

One of the key reasons students gave for not completing courses was that they had to undertake subjects which were not relevant to them. Yet in this study as more choice is provided in core-elective courses, course completion rates have tended to decline. If this is the case, what might be the dynamics which are contributing to lower levels of completion where courses have flexible structures?

One possibility is that the flexibility in many cases is more apparent than real, in that a course which appears flexible when viewed as an accredited curriculum document may be quite inflexible when actually implemented in colleges. Program managers spoke, for example, of resource constraints necessitating decisions by colleges about which modules from a broad range of modules would actually be offered by a college. The realities of resource constraints inevitably place limits on the range of modules or units which can be offered at any time by a provider.

Another explanation may be that where providers are offering a wide range of modules or units, the quality of delivery may be affected. Anecdotally at least, teachers have commented that because they are teaching so many different modules and because they often don't have the opportunity to teach the same modules twice, they do not get the opportunity to improve their teaching when modules are taught on repeated occasions. This puts considerable pressure on teachers who need to be very familiar with a wide range of content and who need a range of delivery skills quite different from those of the traditional teacher.

A further explanation for the lower levels of completion where courses have flexible structures may be that students provided with choice only undertake those parts of a course they want or need to take. If they achieve desired employment or other outcomes, the motivation to complete the course, given all of the other pressures on them, may be reduced. To accept that this is a satisfactory reason for students not to complete courses, policy makers have to believe that students have an appropriate level of awareness of the system and the ability to determine when is the most appropriate time for them to withdraw from their training. This seems highly unlikely given the limited awareness some of the respondents in the phone interviews appeared to have about questions such as whether they had completed the requirements of their course. This may be a useful area for further research.

Another explanation may be that core-only course structures are more likely to be found in industry areas with tighter regulation or licensing requirements or where students must

complete the full course prior to being licensed to work in the industry. In this study, amongst the courses with higher completion rates, we did find a greater proportion of courses where successful completion of the course is required for continued employment or is regarded as one of the normal requirements for entry to the occupation. On the other hand, courses with 'flexible' course structures, in particular structures with a small core and considerable elective choice, appear to be more likely in industry areas where there are lower levels of regulation or where students are able to find employment prior to completing a full qualification.

A final possibility is that the complexity of some of the 'flexible' courses creates a range of problems for providers which combine to make it more likely that students will not complete. Some of the problems raised during the project included:

- Some students have difficulty knowing 'where they are' in completing their course and what further modules or units are required in order to complete the requirements for a qualification. Examples were provided of students having difficulty during enrolment periods, even with the assistance of teachers and counsellors, determining which modules they need to complete the requirements for a qualification. A potential solution to this problem is a more formal process prior to enrolment or early in their course for assisting students to develop a forward plan for meeting the requirements of their course.
- In some cases, students have to search amongst providers to find a college which is offering the particular modules they need to complete the requirements for a course.
- In some situations, there are system difficulties in 'completing' students, that is determining when the requirements for qualifications have been met.
- There were problems interpreting course requirements in some course documents. Sometimes it was difficult to know which subjects were core, which were elective, how many modules were to be completed, how many hours were to be undertaken—particularly where there appeared to be obvious internal conflicts in the course documentation.

When considered alongside the finding that many students have poor understandings of the meaning of course and qualification, one cannot be too surprised that some students will have difficulty with the complexity of some course structures. This may be worth further investigation.

One might argue that such complex course structures are, in fact, not flexible at all and that they potentially create barriers to completing a course in that students are required to select modules which fit the structural requirements of the course rather than because they meet the student's personal or employment needs.

On the other hand, the 'smorgasbord' approach where students can select any modules they or their employer want raises a different set of problems. One raised in discussions concerns the potential for students to select modules which in the end do not constitute a coherent package. Such a selection of modules may seriously limit the student's potential to advance in their employment. A further concern relates to the rather nebulous concept of 'course integrity', an idea incorporated in one of the original NFROT principles, and which related to the problem of comparing courses leading to the same qualification but where students have selected vastly different modules from those available.

Some will perhaps argue that these ideas are of little value and 'out of date' in the context of training packages and units of competency. However substitute the terms 'course' for 'training package' and 'module' for 'unit of competency', and we may well find more commonalities than differences.

The legitimacy of other end-points of training

There is a widespread perception that non-completion of courses is not a positive outcome of the vocational education and training system. Non-completion may be seen as an inefficient use of resources with course completion rates in the order of 18%–37% representing cause for concern. However, there are difficulties in using numbers of course completions (or numbers of qualifications) as a measure of the efficiency of the system in the absence of measures which reflect the importance placed upon other legitimate outcomes of VET. Research and anecdotal information emphasises a wide range of factors not related at all to the quality of the VET 'product' which can impact upon completion. Further, many writers have commented on the range of alternative, legitimate outcomes arising from participation in VET aside from formal completion of a course and award of a qualification:

- students whose main reason for enrolling is to get a job and who leave prior to completing because they have gained employment
- students who enrol in order to develop particular skills for their existing employment
- students whose primary purpose in enrolling was to gain entry into another course

A widely expressed view is that if students have completed all they want of their course and have achieved the outcomes they or their employer desired, then that should be regarded as a legitimate and appropriate positive outcome. Other researchers have highlighted the difference between students who leave a course because they have failed particular modules and those students who have been successful in everything they have attempted prior to leaving a course.

If course completion is seen as only one of a range of legitimate outcomes of VET and is measured alongside these, then a very different view of the system may be obtained. This project has found that many students who leave a course have what could be argued as legitimate reasons for doing so. In earlier parts of this report, rough estimates of some of the end-points for students who enrol in VET courses are made. These suggest that of the students who enter VET courses in any one year:

- approximately 18%–37% of them complete the course
- approximately 25%–30% change employment— and of these, one-third report that their TAFE course is no longer relevant to their work
- approximately 10%–20% transfer into another course while doing their TAFE course

Of this last group we have very little, if any, information about what proportion subsequently go on to complete other qualifications.

A further group which arguably does represent an inefficient use of resources is the relatively large group of students who enrol but do not complete a single module. In some courses in this study, these figures ranged up to 14% of total course enrolments.

Though there is likely to be overlap between these different outcomes, these end-points account for a considerable portion of the cohort entering courses in any one year. Except in the case of students who enrol and then leave prior to completing any modules, one could argue that these end-points represent legitimate alternative outcomes to course completion for many students.

The phone interviews suggested that a relatively high proportion of students change employment during their course and subsequently find their training less relevant to their work or, because of work commitments, do not have time to complete their training. In those courses where students are more likely to change employment during their course, course completion rates are reduced. Rather than viewing this 'drop-out' as a negative outcome of training, an alternative interpretation of these findings is that higher rates of change of employment during a course may indicate the effectiveness of training, at least

from an economic point of view, in that those students who are 'most successful' gain employment or change employment even though they have not completed the qualification. It may also be that course completion, at least in some courses, is a negative indicator—in that students who complete their courses may actually be those students who fail to gain employment.

Unless one wants to offer the argument that students should not change employment while training, it is difficult to regard situations in which students leave courses because of employment changes as 'inefficient' or 'poor use of resources'. If students are moving into more senior positions as a result of gaining further skills as a result of their VET training, this must be seen as a positive outcome, at least from the student's perspective, even if such students do not complete their courses. Further complicating this issue is the fact that little if any longitudinal research has been undertaken which tracks past students' employment through their courses and immediately subsequent to their courses. It is difficult to know whether students are moving into new areas of employment as their career goals change, or move into more senior or new roles as they progress in their careers.

A further end-point, which may be a significant factor for some students, involved transferring into other courses, either offered by the same provider or by another provider, often universities. Some issues have been raised about competition between traditional VET providers and universities with students shifting to university courses subsequent to enrolling in TAFE courses. To some extent this occurs as a result of the timing of the enrolment procedures in the various institutions. From the students' point of view, transferring from one course to another is advantageous. However, it may be argued that there are inefficiencies arising from students transferring from one course to another. Some of these may be countered by improved course advice prior to enrolment; others from greater co-operation between providers in co-ordinating the timing of offers and enrolment procedures.

The relationship between course completion and module completion

The starting point for the implementation of performance measurement is that 'what you measure' will focus the attention of systems and organisations on policies and processes targetted towards improving performance on those explicit measures. This is likely to be emphasised when measurement is linked with the allocation of resources. Consequently, the implementation of performance indicators will have considerable power in focussing the work of organisations—and we need to be sure that they are functioning in ways that we believe is appropriate.

Though it is not the intention of this report to discuss the range of performance indicators which might be used, nor their impact, it is reasonable to raise questions about the potential relationships between various indicators used to measure the performance of the VET system and possible unintended consequences of their implementation.

Funding processes and an emphasis over the last few years on module completion rates as measured by Module Load Completion Rate (MLCR) have meant that States and Territories generally have focussed upon measurement of module completion as a measure of the outputs of the VET system. To an extent, national and statewide processes, including course design processes, have been designed with improvement of module completion rates as a focus.

With ANTA reporting requirements focussing on measurement of module completions, units of competency and qualifications, it is worth asking what relationships exist between module completion and qualification attainment. There is no particular reason to expect that module completion and course completion are simply related. Nor can we assume that the

same actions/mechanisms which are implemented to increase module completion rates will increase course completion rates. It may be that, in some cases, they actually hinder or have a negative impact upon course completion rates.

The findings outlined in chapter 4 suggest that there is almost no relationship between module completion rate and course completion rate. A course with a module completion rate of 80% may, at one extreme, have a course completion rate close to zero, at the other a course completion rate close to 80%–90%. Further, courses which are held up as examples of good practice in improving module completion may themselves have very low course completion rates. This is not to say that a more complex analysis, taking more variables into account, may not yield a better understanding of the relationship between MLCR and course completion rate. But such investigations have yet to be carried out.

A number of questions arise from the emphasis on measurement of module completions, particularly relating to the unintended outcomes which such measurement may have on achieving other desirable outcomes, such as course completion and the awarding of qualifications. In particular the question arises of whether existing policy and performance measurement approaches focussing on module completion encourage amongst both students and institutions, short-term outcomes at the expense of meeting the longer-term interests of students and the community.

When funding is linked to performance measures, the research which exists suggests that funding and performance measures lead to significant changes in organisational practices. Felstead[45], for example, discusses a number of organisational practices arising from the implementation of output-related funding:

- *creaming*—where providers enrol only those who are likely to meet the output criteria—most likely where the applicant pool is larger than the supply of places
- *dredging*—where eligibility criteria are applied to ensure that the most disadvantaged have access to training—thereby minimising the extent of creaming
- *encouraging/discouraging*—training provision may shift towards 'low cost' forms of training and away from 'high cost' forms of training, regardless of the skills required by employers

These outcomes were found, for example, in an evaluation of outcomes-related funding in the UK Training for Work Scheme[46] which suggests that outcome-related funding shifts the focus of training activity toward meeting short-term labour market needs rather than equipping trainees with the skills necessary for long-term employability. This was revealed in a number of ways: shifting away from 'high cost' and/or long duration courses, and creaming.

Felstead suggests that the actual content and delivery of training may also be influenced as a result of the economic incentive of funding—with the content of training changing depending on the way the output is defined. Shifts may occur in the timing of training and reductions may be made in the length of courses. The issue is not that these changes should not occur but whether these changes, which are essentially driven by funding arrangements, have unintended consequences on the quality of other outcomes which are not being measured by existing performance indicators or reflected in funding arrangements.

Given that one of the main reasons students give for undertaking a course is to get a job or own their own business, the question can be asked of whether the emphasis on module completion ahead of course completion and qualifications is appropriate for a large number of VET students. Further, if one of the implications of measurement based on module completion is a shift towards immediate and short-term skills development and training, how does this meet the needs of students whose purpose for undertaking training is to a very great extent the gaining of a qualification?

Some implications of the findings

State and local VET priorities, policies and processes impact upon course completion rates and make it difficult, if not impossible, to compare course completion rates across courses, between institutes and colleges, let alone between the systems in different States. Nonetheless, it is worthwhile considering system-level explanations which can be offered for the differences between the completion rates of the States involved in the study.

Enrolment

Enrolment policies account for some of the differences in completion rates. Some of these policies and processes have been considered in this report:

- Where a series of courses is related, for example in the case of embedded or nested qualifications, whether or not students enrol in the lower level course or the higher level course may vary according to context. The practice is not implemented consistently across or within States or across colleges or courses. This problem has been recognised in a protocol, agreed at a national level, that 'the practice should be encouraged that the student be enrolled in their target qualification and not in a qualification at another level if this is not their target'.[47]
- Complex course structures make it difficult when enrolling students to determine what subjects are required in order to meet course completion requirements. Such course structures place obligations on providers to ensure that students have appropriate support and advice in meeting the requirements for their course.
- Current national reporting processes recognise enrolment in modules as valid even if students attend for only a fraction of a module. In some courses, students who enrol but who do not complete a single module may count for up to 14% of the students who are enrolled in a course. Yet these students will be considered as non-completing students for the purposes of calculating course completions.
- A significant issue for completions has been the frequent practice of enrolling students in a course where students intend only to complete individual or small numbers of modules in a course. In most States, enrolments are 'course enrolments'. Even so, providers in the various States provide varying degrees of flexibility in accepting single module enrolments. In Victoria, where students enrol in modules rather than courses, course enrolments are derived from module enrolments. At the system level, the only indication that students have an intention of completing the requirements of a course is given by students enrolling and participating in multiple modules associated with a particular course. At the present time, for the purposes of calculating course completions, all of these enrolments would be considered course enrolments, with an obvious impact upon the calculation of course completion rates.

Quality of data and information

The quality and consistency of the data available from providers is extremely variable. Data relating to subjects or course details, student enrolments and student results for students in courses as recently as 1995 or 1996 is considered 'historical' information by providers and, when needed, has to be accessed from archives.

The difficulty of obtaining information about courses which students have undertaken must make processes for awarding credit or negotiating articulation arrangements between institutions and providers difficult.

Recognising when a student has completed a course

The processes for recognising when a student has completed a course vary across States. In most States, the system recognises that students have completed the requirements for a qualification when students apply for the qualification. In New South Wales, students are automatically awarded a qualification once they have completed the requirements for a qualification. As a consequence of these different approaches to recognising when students have completed the requirements for a qualification, the possibility exists that completion rates calculated on the basis of qualifications awarded will under-represent the actual number of students who have completed the requirements for a qualification. Despite the claims of some States that students are unlikely not to apply for a qualification once they have completed the requirements for a course, there is little evidence supporting or refuting this statement. Further the findings of this project suggest that many students are unclear about ideas such as 'course', 'qualification' and when and if they have met course requirements.

Course structure changes during the 1990s

Because this project focussed on courses which were offered in 1995 and 1996, many of the courses which were included may have dated back years earlier and, to some extent fail to pick up on some of the more recent course design innovations. A number of course structure innovations—embedded course structures allowing for multiple entry and exit points—'umbrella courses', even training packages, have been developed to increase flexibility as well as meeting the needs of students wishing to enrol in specific modules.

At least anecdotally, these new course structure innovations have provided degrees of flexibility not available in earlier courses. It would be useful and interesting to test the ideas raised in this report about whether or not the increased flexibility and range of elective choice has in fact resulted in improved course completion rates in these newer course structures.

Reporting course completions

One of the conclusions from this project must be that course completion and qualifications have lesser importance than other measures for reporting the effectiveness and efficiency of the VET system and that systems do not see course completion or qualifications as key measures for reporting or public accountability. Little publicly-accessible information is available on course completions. There is little evidence that systems are promoting or measuring completions or qualifications beyond the requirements of national reporting. Yet (a) the vast majority of students interviewed in this project said that they had, at the time they enrolled, intended to complete the course and (b) those who *did* complete were more likely to have achieved the reasons for which they enrolled.

Systems seem quite reluctant to provide such information on the basis that it will be used for making what are seen as inappropriate comparisons between systems. Yet without this information it is not even possible to determine what the differences are. Nor is it possible to make judgements about whether particular policy approaches have beneficial consequences.

If course completion is not sufficiently important to systems that they want to measure it as an output of the system, then one needs to ask why systems utilise the course rather than module or 'unit of competency' as a basis for enrolling students, and also, if systems do not regard course completion as important, why so many students want to complete the courses in which they enrol.

Notes

1 Some shorter courses do not formally lead to 'qualifications'.
2 Moy, J 1999, *Relationship between course design, course delivery and course outcomes—A review of the literature*, Educational Service Divisions Research and Planning Sub-Committee, TAFE NSW.
3 ANTA 1999, *Key performance measures for vocational education and training*, Final report of the Performance Review Committee to the ANTA Board, May 1999.
4 Australian Committee for Training Curriculum 1994, *User's guide to course design for competency-based curriculum*, 2nd ed, ACTRAC Products Ltd.
5 ANTA 1996, *ANTA Annual Report 1995—Benchmarking VET—The performance of the vocational education and training sector in 1995*, Vol. 3, ANTA, Queensland, p.31.
6 Cleary, M & Nicholls, R 1998, *Understanding and improving module completions*, Office of Training and Further Education, Victoria.
7 Office of Training and Further Education (n.d.), *Outcomes from vocational education and training for employers and participants*, OTFE, p.19.
8 National Training Framework Committee 1998, *Guidelines for the customisation of accredited courses—which replaced earlier guidelines*. See Wood, G 1995, 'Customisation of Courses', *Curriculum Matters*, July 1995, p.7.
9 Foyster, J et al. 1999, *Student Flows through Australian TAFE courses: Completion, partial completion and failure*, NCVER, April 1999.
10 Cleary, M & Nicholls, R 1998, *Understanding and Improving Module Completions*, Office of Training and Further Education, Victoria.
11 National Centre for Vocational Education Research 1998, *AVETMISS—The Standard for Providers*, NCVER (Ref. S2–12).
12 National Centre for Vocational Education Research 1998,—compiled from each of the separate State and Territory reports.
13 National Centre for Vocational Education Research 1998,—compiled from each of the separate State and Territory reports
14 The table categorises courses as 'one-year', 'two-year' and 'three-year'. These are non-standard terms used to refer to the usual time which would be taken by a full-time student to complete the course.
15 Foyster, J et al. 1999, *Student Flows through Australian TAFE courses: Completion, partial completion and failure*, NCVER, April 1999, p.xv.
16 This figure was calculated by the author based upon a sample of 30 courses and enrolment data derived from the four-year period 1995–98.
17 Department of Employment, Education and Training 1994, *Programme performance statements*, DEET, Canberra.
18 Beswick, W et al. 1999, *Traineeship non-completion*, Research and Evaluation Branch, Department of Education, Training and Youth Affairs, p.14.
19 Smith, L R 1998, *Apprenticeships and traineeships: Queensland trends*, Department of Employment, Training and Industrial Relations, Queensland.
20 Beswick, W et al. 1999, *Traineeship non-completion*, Research and Evaluation Branch, Department of Education, Training and Youth Affairs, p.15.
21 'Older students less likely to finish', *The Age*, 5 June, 1999.
22 Australian National Training Authority 1996, *ANTA Annual Report 1995—Benchmarking VET—The performance of the vocational education and training sector in 1995*, Vol. 3, ANTA, Queensland, p.31.
23 Examples include: Cleary & Nicholls 1998; Moy 1999.
24 Moy 1999.
25 Beswick, W et al. 1999, *Traineeship non-completion*, Research and Evaluation Branch, Department of Education, Training and Youth Affairs.
26 In 1999, the first 'Student Outcomes Survey' is to be undertaken by NCVER. Students who are normally excluded from the *Graduate Destinations Survey* because they have not completed a qualification will be included in the sample.
27 Dawe, S 1994, *A report to ACVETS of the pilot 1993 national TAFE exit survey of students*, Australian Committee on Vocational Education and Training Statistics.
28 Hansford & Duncan 1996, *Five TAFE middle-level training programs: Evaluation summary*, NCVER, Adelaide.
29 Beswick, W et al. 1999, *Traineeship Non-Completion*, Research and Evaluation Branch, Department of Education, Training and Youth Affairs.
30 Smith, L R 1998, *Apprenticeships and traineeships: Queensland trends*, Department of Employment, Training and Industrial Relations, Queensland.

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31 Australian National Training Authority 1996, *ANTA Annual Report 1995—Benchmarking VET—The performance of the vocational education and training sector in 1995*, Vol. 3, ANTA, Queensland, p.29.

32 Kebavac, L et al. 1997, *The Australian Experience with Education Indicators: The particular problems posed by a system offering increasingly individualised learning opportunities, especially for vocational education*. Paper prepared for the Conference 'Indicators for assessing the quality and efficiency of education systems—policy relevance and challenges of international comparisons', Beijing 6–9 October 1997.

33 Misko, J 1999, *Different modes of delivery—Student outcomes and students' perspectives*, paper presented at the AVETRA Conference, February 1999.

34 Beswick, W et al. 1999, *Traineeship non-completion*, Research and Evaluation Branch, Department of Education, Training and Youth Affairs.

35 National Centre for Vocational Education Research 1999, *Multivariate analysis of Victorian TAFE institute module pass and completion rates*. (Not published).

36 Yorke, M 1999, 'Student withdrawal during the first year of higher education in England', *Journal of Institutional Research in Australia, vol.8*, no.1, May 1999.

37 Coincidentally, a similar methodology was used in this study to analyse the results of phone interviews with 762 past students of VET courses in New South Wales, Victoria and Western Australia. The results of this work are presented in chapter 6.

38 Australian Committee on Training Curriculum 1994, *User's Guide to Course Design for Competency-Based Curriculum* 2nd Ed, ACTRAC Products Ltd.

39 'Customisation of Courses', *Curriculum Matters*, July 1995, p.7.

40 National Training Framework Committee 1998, *Guidelines for the Customisation of Accredited Courses—which replaced earlier guidelines*. See Wood, G 1995, 'Customisation of Courses', *Curriculum Matters*, July 1995, p.7.

41 Pillay, H & Brownlee, J 1996, 'Provision of Multiple Pathways: Are we facilitating better learning or just greater accessibility?', *Learning & Work: The Challenges*, Conference Papers, Griffith University.

42 Smith, E et al. 1997, *Making a Difference? How competency-based training has changed teaching and learning*, Charles Sturt University School of Management, Wagga Wagga, p.54.

43 Butler, J 1998, *The curriculum design process*, Graduate School of Education, The University of Queensland.

44 Ramsden, Paul 1992, *Learning to Teach in Higher Education*, London, Routledge.

45 Moy, J 1999, *Relationship between course design, course delivery and course outcomes—A review of the literature*, Educational Service Divisions Research and Planning Sub-Committee, TAFE NSW.

46 Cleary, M & Nicholls, R 1998, *Understanding and improving module completions*, Office of Training and Further Education, Victoria.

47 Foyster, J et al. 1999, *Student flows through Australian TAFE courses: Completion, partial completion and failure*, NCVER, April 1999.

48 In Victoria, students are enrolled regularly within modules rather than courses. All enrolments are taken at the module level. Module enrolment consists of a client enrolling at a training provider location in a module which is associated with a course. Course enrolments are 'derived'. At the system level, the only indication that students have an intention of completing the requirements of a course is given by students enrolling and participating in multiple modules associated with a particular course.

49 Guba, E G & Lincoln, Y S 1981, *Effective evaluation*, San Francisco, Jossey-Bass.

50 The scattergram was constructed by using data relating to 112 TAFE NSW courses.

51 Cleary, M & Nicholls, R 1998, *Understanding and improving module completions*, Office of Training and Further Education, Victoria. Also Office of Training and Further Education 1997, *Patterns in module completions 1995—Victorian TAFE Institutes*, Strategic Planning and Research Division, Office of Training and Further Education, Melbourne.

52 Module completion rate data was provided by Statistics Unit of TAFE NSW, dated 16 Aug. 1999. The data provided gave a % module completion rate for each course. Module completion rate is defined as [(No. of passes/No. of confirmed enrolments) x 100%]

53 These are indicated by PROPCORE and ELECPROP respectively in the tables later in this section.

54 As explained later in the chapter, there is concern about the reliability with which students responded to this question.

55 NCVER 1997, *TAFE graduate destination survey 1997: National Report Survey Findings*, pp.22–23, NCVER Ltd.

56 Office of Training and Further Education n.d., *Outcomes from Vocational Education and Training for employers and participants*, OTFE.

57 NCVER 1997, *TAFE graduate destination survey 1997: National Report Survey Findings*, p.27, NCVER Ltd.

58 Note that whether or not students were asked questions 12, 13, 15, 53 and 54 depended on their responses to earlier questions. The responses to these five questions are shown separately at the end of the appendix.

59 Christie, G & Warner, D 1998, *The readiness of the Vocational Educational and Training client for flexible delivery and on-line learning*, TAFE Queensland, p.4.

60 Yorke, M 1999, 'Student withdrawal during the first year of higher education in England', *Journal of Institutional Research in Australia*, vol.8, no.1, May 1999.

61 Loadings of only 0.4 and above are shown for clarity. Fifteen of the factors did not load at this criterion level. The Kaiser–Meyer–Olkin measure of sampling adequacy was 0.776. For interest, an additional factor analysis based only on the NSW results was also undertaken, (see appendix A).

62 Yorke, M 1999, 'Student withdrawal during the first year of higher education in England', *Journal of Institutional Research in Australia*, vol.8, no.1, May 1999.

63 See appendix A.

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64 Office of Training and Further Education n.d., *Outcomes from Vocational Education and Training for employers and participants*, OTFE.

65 Felstead, A 1998, *Output-related funding in vocational education and training. A discussion paper and case studies*, CEDEFOP (European Centre for the Development of Vocational Training), Thessaloniki.

66 Coopers & Lybrand 1995, *Evaluation of the training for work pilots, A report for the Employment Department*, DfEE, London, March 1995.

67 ANTA 1999, Key *Performance Measures for Vocational Education and Training*, Final Report of the Performance Review Committee to the ANTA Board, May 1999, p.22.

Appendix A
Interview schedule

Introduction and explanation of the survey

I am ringing on behalf of (TAFE NSW/the Victorian Office for Training and Further Education/etc.).

We wish to speak with you briefly about a TAFE course in which you were enrolled a few years ago and to ask you a range of questions. The results will be used to improve the quality of Australian vocational education and training courses. Many of the questions require only a yes/no response and the whole questionnaire should take about ten minutes.

Any personal information collected during this interview is completely confidential. At no stage will your personal details be used for any other purpose.

SECTION A
Your intention for enrolling in the course in the first place

1. What was your main reason for enrolling in this course?

To get a job (or own business)	■	1
To try for a different career	■	2
To get a better job or promotion	■	3
It was a requirement of my job	■	4
To get extra skills for my job	■	5
To get into another course of study	■	6
For interest or personal development	■	7
Other reasons	■	8

2. When you enrolled in the course was it your intention to complete all of the subjects required for a qualification or just specific subjects in the course?

The whole course	■	1
Specific subjects	■	2

3. On a scale of 1 to 5, when you enrolled in the course, how important was it to you to get the qualification (i.e. the certificate or diploma which says you have completed a course) at the end of the course?

1 = not important; 5 = very important ■

4. At the time you left the course, did you think that your participation in the course had helped you to achieve your main reason for doing the course?

Yes	■	1
No	■	2
Partly	■	3
Not sure	■	4

SECTION B:
Some details of the course in which you were enrolled

5. How many hours each week did you usually attend classes for your course?

1–5 hours	■	1
6–10 hours	■	2
11–15 hours	■	3
16–20 hours	■	4
More than 20 hours	■	5
Block release	■	6
Day release	■	7
Did not attend formal classes—external study	■	8

6. Which of the following best describes the way the course was delivered?

Classes at college/centre	■	1
Classes at the workplace	■	2
Classes at both the college/centre and in the workplace	■	3
External study or self-paced learning (i.e. not in a classroom)	■	4
Other	■	5

Whether you completed the qualification

7. Did you complete the course in which you were enrolled and receive the qualification?

Yes, I completed the course and received the qualification.	■	1
No, I didn't complete all the subjects required for the qualification.	■	2

How far you got through the course

8. How many subjects did you complete while you were enrolled in the course?

None	■	1
1–4	■	2
5–10	■	3
More than 10	■	4
All subjects required for the qualification	■	5
Don't know	■	6

If the student completed the requirements for the qualification, go to SECTION D, the questions on employment status.

If the student did not complete the qualification, ask the following question and then go on to SECTION C:

9. Approximately, how many subjects in total would you have needed to complete in order to finish the course and complete the qualification?

1–10	■	1
11–20	■	2
21–30	■	3
More than 30	■	4
Don't know	■	5

SECTION C:
If you did not complete the course, why you left the course

The next section of the interview looks at your reasons for not completing the course.

For each of the following, can you tell me whether or not the statement was a reason for your leaving the course before completing it.

If the statement is not true and was not an important factor in your leaving, give it a score of ZERO.

If the statement is true to some extent but not important, it gets a ONE

If it an important factor in your leaving, give it a TWO

If it was very important, it gets a THREE.

0	Not at all true/not at all important/wasn't a factor in my decision not to complete the course
1	To some extent true—but not important
2	True/important
3	True/very important

To what extent did any of the following factors influence your decision to leave the course before completing it?

1	Employment opportunities within my industry are declining and I couldn't see the point in finishing my course	■
2	I wasn't able to get a student/government allowance	■
3	I couldn't afford to remain in study	■
4	At the time I was studying, there were events in our local community which were more important than study	■
5	I found the time and work demands of course/study too great	■
6	I had difficulties balancing study with commitments to my family	■
7	I had difficulties balancing study with my social commitments and friends	■
8	The level of writing and reading skills required in the course were too difficult	■
9	I needed better personal skills such as time management, planning and organisation skills	■
10	I had trouble keeping up-to-date with the learning I was required to do at home	■
11	My employment changed while I was studying	■
	If true:	
12	*As a result, the course was less relevant to my work*	■
13	*My new job meant that I didn't have the time/opportunity to complete the course*	■
14	I got what I wanted from the course without needing to complete the whole course	■
	If true:	
15	*I completed all the subjects I wanted to do*	■
16	I found that the course was not appropriate to my needs	■
17	I changed my career goals—and the course was no longer relevant	■
18	I chose the wrong course	■
19	I transferred to a more appropriate course	■
20	I transferred to another institution	■
21	I just lost interest	■
22	*I was not happy with the quality of the course*	■
23	I didn't feel that the course *was valuable*	■

The next section asks about the quality of the course and how well it was delivered. Again, use the numbers zero to three to rate how important these factors were to you.

24	I wasn't happy with the teacher or other students in the course	■
25	There was not enough opportunity to interact with other students within the course	■
26	The pre-course information and advice didn't explain the course or the subjects in the course well enough	■

27	I found that services such as child care, library, cafeteria, etc., were either not available or not available at appropriate times	■
28	The quality of the teaching was not what I expected	■
29	The quality of the facilities was not what I expected	■
30	The location of my place of training was not close enough to home or work	■
31	I didn't have good enough access to transport to get to my place of training	■
32	I couldn't get access to appropriate workplaces for work experience/ work placement sections of course	■
33	The course was too long—and went over too many or years	■
34	Too many subjects were required to complete the course	■
35	Many of the subjects in the course were too long	■
36	I had to complete subjects that were not relevant to what I wanted to do	■
37	There wasn't enough choice in the range of subjects available in the course	■
38	The choice of subjects was not really relevant to my needs	■
39	I couldn't select the subjects I wanted to do because subjects could only be done in a particular order	■
40	I couldn't select the subjects I wanted to do because they were not offered in the college where I was studying	■
41	The course didn't seem to provide enough workplace learning opportunities such as work experience and work placement	■
42	I wasn't able to get credit for learning that I already had when I started the course	■
43	There weren't subjects in the course to provide opportunities for me to learn basic skills, *particularly in language, maths, etc.*, which I needed in order to be successful	■
44	Rather than completing the course in which I enrolled, I was able to leave the course with another qualification	■
45	I was able to use the subjects I had completed to gain entry (or for advanced standing) in another course	■
46	I didn't feel that the assessment tasks were appropriate to the course goals	■
47	The timing of assessment tasks meant that I would often have too many assessments at the same time	■
48	*I get anxious about assessment and left because assessment tasks were due*	■
49	I didn't get adequate feedback after assessment events	■
50	The course had too great a workload each week and I found it hard to keep up	■
51	I was required to attend college/place of learning for too many hours per week	■
52	The timetable did not suit me or my work commitments	■

Depending on the delivery mode identified by respondents earlier in the interview, either of the next two:

53 It did not suit me to have to attend college each week to go to classes/ training sessions. I would have preferred to have been able to learn at home or while I was working ■

54 It did not suit me to learn *externally*. I would have preferred to have been able to go to the college for classes ■

55 The way in which the teacher taught did not suit the way I learn ■

56 The design of the learning materials did not suit the way I learn ■

57 There was no tutorial support or teacher assistance provided when I had difficulties ■

58 There was too little communication/interaction between the teacher/ trainer and students within the course ■

SECTION D: Employment situation

1. At the time you enrolled in the course, what was your employment situation?

Employed full-time	■	1
Employed part-time	■	2
Self-employed	■	3
Employer	■	4
Not employed—seeking work	■	5
Not employed—not seeking work	■	6
Not sure	■	7

2. While you were studying did you change your employment?

Yes	■	1
No	■	2

3. If yes, was your study relevant to the work you were doing in your new employment?

Yes	■	1
No	■	2

4. Since you left the course, have you enrolled in any further TAFE/VET courses/programs?

Yes	■	1
No	■	2

5. If yes, what course or program?

Section E: Personal information—about you

And to finish the interview, a few questions about you:

1. Your gender?

Male	■	1
Female	■	2

2. Do you speak a language other than English at home?

Yes	■	1
No	■	2

3. Are you of Aboriginal or Torres Strait Islander origin?

No	■	1
Yes, Aboriginal	■	2
Yes, Torres Strait Islander	■	3

4. Do you have a disability?

Yes	■	1
No	■	2

5. At the time you were studying, which of the following best describes the community in which you lived?

Suburb in a capital city	■	1
Regional town or centre	■	2
Rural/country town/community	■	3
Postcode?		

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ISBN 1 74096 015 7 web edition

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